# Subsidy Advice Unit Report on the UK SHORE subsidy scheme

**Referred by Innovate UK**

**30 January 2026**

Subsidy Advice Unit

Part of the Competition and Markets Authority

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# 1. The Referral

1.1 On 10 December 2025, Innovate UK requested a report from the Subsidy Advice Unit (the SAU)[1] in relation to the UK SHORE subsidy scheme (the Scheme) under section 52 of the Subsidy Control Act 2022 (the Act).[2]

1.2 This report evaluates Innovate UK's assessment of compliance (the Assessment) of the Scheme with the requirements of Chapters 1 and 2 of Part 2 of the Act.[3] It is based on the information and evidence included in the Assessment.

1.3 This report is provided as non-binding advice to Innovate UK. It does not consider whether the Scheme should be implemented, or directly assess whether it complies with the subsidy control requirements.

## Summary

1.4 The Assessment uses the four-step structure described in the Statutory Guidance for the United Kingdom Subsidy Control Regime (the Statutory Guidance) and as reflected in the SAU's Guidance on the operation of the subsidy control functions of the Subsidy Advice Unit (the SAU Guidance).

1.5 In our view, Innovate UK has considered in detail the compliance of the Scheme with the subsidy control and energy and environment principles. In particular, the Assessment:

(a) describes and evidences what would be likely to happen if the Scheme was not implemented at both the sector level and at the level of individual companies (Principle C);

(b) demonstrates and evidences a number of design features of the Scheme that contribute to minimising negative effects of the Scheme on competition and investment within the United Kingdom (Principle F); and

(c) clearly sets out positive effects of the Scheme, considers its geographic and distributional impacts, as well as potential negative impacts, and conducts a balancing exercise between them in line with the Statutory Guidance (Principle G).

[1] The SAU is part of the Competition and Markets Authority.
[2] Referral of the proposed UK SHORE subsidy scheme by Innovate UK - GOV.UK.
[3] Chapter 1 of Part 2 of the Act requires a public authority to consider the subsidy control principles and energy and environment principles before deciding to give a subsidy. The public authority must not award the subsidy unless it is of the view that it is consistent with those principles. Chapter 2 of Part 2 of the Act prohibits the giving of certain kinds of subsidies and, in relation to certain other categories of subsidy creates a number of requirements with which public authorities must comply.

1.6 However, the Assessment should discuss in more detail the extent to which the inclusion of alternative subsidy instruments (such as repayable advances or equity investments) that could reduce the overall level of subsidy required and be less distortive were considered as part of the Scheme's design (Principle B).

1.7 We discuss these areas below, along with other areas where we consider the Assessment could provide more explanation and detail, for consideration by Innovate UK in finalising its assessment.

## The referred scheme

1.8 Through the Scheme, Innovate UK proposes to provide approximately £356 million in grant funding to support the research and development (R&D) of the technologies required to decarbonise the UK's maritime sector. The Scheme is part of the UK Shipping Office for Reducing Emissions (UK SHORE) programme,[4] and will be delivered by Innovate UK on behalf of the Department for Transport.

1.9 The Scheme will support businesses, including SMEs and larger companies, as well as universities, research organisations, public and third sector organisations that collaborate with industry partners. Beneficiaries are expected to form consortia, with a UK-registered business as the lead for all projects. It is expected that supported projects will focus on technologies relating to alternative fuels,[5] zero emission vessels, energy efficiency, and supporting infrastructure across a range of low to high technology readiness levels (TRL).[6]

1.10 The Scheme will provide funding across two competitions, the Clean Maritime Demonstration Competition (CMDC) and the Zero Emissions Vessels and Infrastructure (ZEVI) competition:

(a) CMDC will provide support for low/mid/high-TRL technologies and projects which require an additional stage of R&D before progressing to a long-term commercial trial.

(b) The ZEVI competition will focus on supporting projects at a high-TRL level with a three-year build phase and sustained demonstration of their technology. Projects must include a ship owner or manufacturer or operator, or an infrastructure owner or operator, such as a port or windfarm.

1.11 Applicants must apply for funding through an open competition as part of a consortium. The maximum subsidy per beneficiary per project will be set at £25

[4] UK Shipping Office for Reducing Emissions - Innovate UK Business Connect.
[5] Such as electricity, methanol, ammonia, and hydrogen.
[6] TRL is a type of measurement system used to assess the maturity level of a particular technology. See Eligibility of technology readiness levels (TRL) – UKRI for more detail.

million. The percentage of project costs[7] eligible for funding will depend on the category of R&D undertaken[8] and the enterprise size[9] of the beneficiary:

(a) For fundamental research projects, a 100% intervention rate may apply.

(b) For feasibility studies and industrial research projects, micro or small organisations can receive up to 70%, medium-sized organisations up to 60%, and large organisations up to 50%.

(c) For experimental development projects, micro or small organisations can receive up to 45%, medium-sized organisations up to 35%, and large organisations up to 25%.

(d) Capital costs may be funded under the ZEVI competition. Capital equipment must be relevant to the project and the maximum intervention rate on these purchases is 80%.

1.12 Although grants will be available UK-wide, and competitions open to organisations in both Great Britain (GB) and Northern Ireland, this Scheme will only cover subsidies for GB enterprises, while support to enterprises in Northern Ireland will be dealt with in accordance with EU State Aid rules under Article 10 of the Windsor Framework.

1.13 Innovate UK state that the Scheme is a Subsidy Scheme of Particular Interest because it allows for the provision of one or more Subsidies of Particular Interest to be given.[10] In particular, Innovate UK have stated that the Scheme will allow for subsidies of over £5 million to enterprises active in a sensitive sector.

[7] Eligible costs are project-related and include costs that relate to materials, capital usage, labour, overheads, subcontract, travel and subsistence, and other costs such as laboratory usage, training, IP and regulatory compliance. For capital projects under the ZEVI competition, capital costs relating to equipment, labour, utilisation, property and other capital costs are eligible for support.
[8] Categories of research and development – UKRI.
[9] The rates will be determined by whether the enterprise is small, medium or large in line with the SME definition. See Supplementary information: Small and Medium-sized Enterprises definition (HTML) - GOV.UK.
[10] Within the meaning of regulation 3 of The Subsidy Control (Subsidies and Schemes of Interest or Particular Interest) Regulations 2022 (as amended) which set out the conditions under which a subsidy or scheme is considered to be of particular interest.

# 2. The SAU's Evaluation

2.1 This section sets out our evaluation of the Assessment, following the four-step structure used by Innovate UK.

## Step 1: Identifying the policy objective, ensuring it addresses a market failure or equity concern, and determining whether a subsidy is the right tool to use

2.2 Under Step 1, public authorities should consider compliance of a subsidy with:

(a) Principle A: Subsidies should pursue a specific policy objective in order to remedy an identified market failure or address an equity rationale (such as local or regional disadvantage, social difficulties or distributional concerns); and

(b) Principle E: Subsidies should be an appropriate policy instrument for achieving their specific policy objective and that objective cannot be achieved through other, less distortive, means.[11]

### Policy objectives

2.3 The Assessment states that the key policy objective of the Scheme is to increase the level of R&D of clean maritime technologies across the TRL spectrum, demonstrating and proving the feasibility of technologies that will facilitate a pathway for the maritime sector to decarbonise.

2.4 The Assessment explains that increased levels of R&D will enable wider objectives of the Scheme to be realised, which are to:

(a) accelerate emissions reductions across the maritime sector as clean maritime technologies are commercialised and implemented, which will help to de-risk the pathway outlined in the Government's Maritime Decarbonisation Strategy (MDS) which relies on alternative fuels and technologies being available and affordable to the sector as soon as possible;[12]

(b) enable the UK to capture economic benefits from the clean maritime transition by supporting productivity, jobs, and growth in the maritime and associated sectors; and

[11] See Statutory Guidance, paragraphs 3.33–3.59 and the SAU Guidance, paragraphs 3.6–3.10 for further detail.
[12] Maritime Decarbonisation Strategy.

(c) support key government missions of Kickstarting Economic Growth and Make Britain a Clean Energy Superpower.[13]

2.5 In our view, the Assessment clearly describes and evidences the key policy objective of the Scheme and sets out how it aligns with wider objectives, including for the maritime sector specifically.

**Market failure**

2.6 Market failures arise where market forces alone do not produce an efficient outcome. When this arises, businesses may make investments that are financially rational for themselves, but not socially desirable.[14]

2.7 The Assessment describes the following market failures which hinder R&D investment in clean maritime technologies:

(a) Coordination problems: The Assessment states that investment into the development or implementation of new technology is complicated by the need for complementary port-side and fuel infrastructure to enable the usage of new technology, with the Assessment outlining that these decisions are controlled by separate port and vessel operators. It also explains that this problem is exacerbated by the fact that port operators are incentivised to wait to invest in new port technology until it becomes clear what technology vessel operators will adopt. The Assessment identifies that coordination issues relating to maritime R&D are further aggravated by the complexity of multi-party arrangements involving manufacturers, shipbuilders, ports, technology providers and regulators, as well as challenges determining who owns jointly developed intellectual property. The Assessment explains that a consortium-based approach helps to mitigate this market failure.

(b) Asymmetric information: The Assessment sets out that lack of knowledge and uncertainty amongst operators around the risk and potential of new technologies deters investment,[15] especially due to the risk of investing in 'stranded assets' which could become obsolete due to incompatibility with breakthrough or newly adopted fuels or technologies. It explains that the Scheme will address this market failure by requiring a consortium-based approach which will encourage the sharing of knowledge and cross-sector collaboration.

[13] Plan for Change.
[14] Statutory Guidance, paragraphs 3.36–3.51.
[15] Innovators are expected to know more about the risks and potential of their technology than investors, regulators and shipowners.

(c) Positive externalities: The Assessment uses evidence from the evaluation of the UK SHORE programme to explain that positive externalities through wider spillovers and public benefits, such as shared knowledge or future development of complementary goods, which arise from R&D are not captured or fully considered in investment decisions, leading to underinvestment compared to the optimum social level. This is expected to be particularly prevalent for low-and-mid TRL projects. The Assessment explains that while intellectual property rights can act as a mechanism through which firms can appropriate the benefits of their R&D, stronger and complementary incentives will be needed to reduce the level of risk caused by asymmetric information and the coordination failure. The Assessment explains that the Scheme will address this market failure by increasing investment in R&D in clean maritime technologies to encourage positive spillovers.

(d) Negative externalities: The Assessment also explains that underinvestment in clean maritime technologies leads to negative externalities due to fossil fuels remaining the cheapest option for vessel operators to utilise, as their price does not reflect their negative environmental impact and true societal cost. The Assessment explains that the Scheme will address this market failure by ensuring that there is sufficient investment in clean maritime technologies for these to be adopted at scale in the future as an alternative to fossil fuels.

2.8 In our view, the Assessment provides a credible description of the market failures that the Scheme seeks to remedy. However, the Assessment could better evidence the extent to which market failures such as coordination and asymmetric information are significant enough to inhibit R&D in the UK maritime sector specifically.

**Appropriateness**

2.9 Public authorities must determine whether a subsidy is the most appropriate instrument for achieving the policy objective. As part of this, they should consider other ways of addressing the market failure or equity issue.[16]

2.10 The Assessment explains that regulatory measures would be unlikely to achieve the policy objective. It argues that regulation alone would not guarantee any actual increase in R&D investment in the UK without targeted government support,

[16] Statutory Guidance, paragraphs 3.57–3.59.

especially in light of the market failures which hinder investment in maritime decarbonisation.[17]

2.11 The Assessment states that tax incentives or direct subsidies to maritime operators to adopt clean technologies would be difficult to deliver due to the high-cost differential between alternative fuels and incumbent fossil fuels. It also states that these measures would likely be less efficient and no less distortive than the Scheme by directing investment towards larger firms and current transitional technologies rather than riskier but more impactful investments.

2.12 The Assessment explains that neither loans nor equity investments would be appropriate means to achieve the policy objective. It states that loans would only slightly mitigate the risks associated with investing in new technologies, meaning projects may focus on technologies closer to commercialisation rather than supporting innovation across the TRL spectrum. The Assessment states that equity investments are not appropriate as they may exclude key organisations such as academic institutions from consortia, risking the persistence of market failures such as coordination problems and asymmetric information. It also suggests that loans and equity investments may favour larger, more established companies with greater experience, financial capacity and more suitable business structures.

2.13 The Assessment concludes that the Scheme is the most effective approach to achieve the policy objectives as it will support a wider range of low to high-TRL technologies and be less distortive than the alternative options. It uses examples of successful projects delivered under the existing UK SHORE programme to evidence this.

2.14 In our view, the Assessment demonstrates that Innovate UK has considered other ways of achieving its policy objective and explains why a subsidy was the most appropriate option. However, the Assessment could outline in more detail why non-subsidised loans would not be appropriate for projects that are close to deployment, such as those with a relatively high-TRL.

## Step 2: Ensuring that the subsidy is designed to create the right incentives for the beneficiary and bring about a change

2.15 Under Step 2, public authorities should consider compliance of a subsidy with:

(a) Principle C: Subsidies should be designed to bring about a change of economic behaviour of the beneficiary. That change should be something

[17] See paragraph 2.7.

that would not happen without the subsidy and be conducive to achieving its specific policy objective; and

(b) Principle D: Subsidies should not normally compensate for the costs the beneficiary would have funded in the absence of any subsidy.[18]

**Counterfactual**

2.16 In assessing the counterfactual, public authorities should consider what would likely happen in the future – over both the long and short term – if no subsidy were awarded (the 'do nothing' scenario).[19]

2.17 The Assessment sets out a counterfactual scenario where the Scheme is not implemented, but the planned regulations to decarbonise the maritime sector are implemented.[20]

2.18 It explains that there is significant uncertainty around the implementation and stringency of the policy instruments as they are not yet firm and funded, and as a result, there may be an incentive for investments to focus on transitional and safer solutions, rather than ambitious solutions that can decarbonise the entire maritime sector. The Assessment states this could lead to underinvestment in the range of zero or near zero (ZNZ) emission fuels and technologies for the maritime sector, many of which remain at an early stage of development, as the market failures identified[21] will remain unaddressed.

2.19 The Assessment further explains that, where no subsidy is provided for R&D in the UK, it is likely that investment in new technologies would take place abroad, particularly in countries where shipbuilding is already located and those with strategic plans to benefit from the transition towards ZNZ emission fuels and technologies. It includes information on the countries that have launched similar initiatives to the Scheme. The Assessment states that any UK-based R&D would be delayed in this scenario and limited to larger organisations with the capital to meet high up-front costs.

2.20 The Assessment then provides an overview of the positive quantitative and qualitative impacts of the Scheme compared with the counterfactual, which include accelerated emission savings, financial returns resulting from the R&D, leveraged private investment in the projects supported by the Scheme, job creation and retention in the sector, reduction of air pollution and reduced costs to businesses of implementing new technologies and from energy efficiency. It also outlines

[18] See Statutory Guidance, paragraphs 3.60–3.74 and the SAU Guidance, paragraphs 3.11–3.13 for further detail.
[19] Statutory Guidance, paragraphs 3.63–3.65.
[20] These instruments include domestic policies such as the introduction of domestic maritime emissions into the UK emissions trading and domestic fuel standards, as well as the implementation of international regulations.
[21] See paragraph 2.7.

some potential disbenefits of the Scheme but concludes that both the value-for-money and benefit-to-cost of the Scheme are estimated to be high.

2.21 The Assessment also explains that at an individual company level, receiving subsidies through the Scheme will reduce the risks associated with R&D and directly influence their economic case for investment and further development of their projects. It explains that an evaluation of previous UK SHORE competitions showed that beneficiaries found that funding allowed them to pursue projects that otherwise would have been financially unfeasible.

2.22 In our view, the Assessment describes and evidences what would be likely to happen if the Scheme was not implemented at both the sector level and at the level of individual companies.

**Changes in economic behaviour of the beneficiary and additionality**

2.23 Subsidies must bring about something that would not have occurred without the subsidy.[22] They should not be used to finance a project or activity that the beneficiary would have undertaken in a similar form, manner, and timeframe without the subsidy ('additionality').[23] For schemes, this means that public authorities should, where possible and reasonable, ensure the scheme's design can identify in advance and exclude those beneficiaries for which it can be reasonably determined would likely proceed without subsidy.[24]

2.24 The Assessment explains that the Scheme will fund high risk, innovative projects which would be unlikely to go ahead without government funding. It states that by providing grant funding, the Scheme will derisk potentially transformational projects and incentivise increased levels of private investment and R&D. The Assessment uses the evaluation of previous UK SHORE competitions to illustrate the high proportion of projects that indicated they would not have gone ahead without UK SHORE funding, and also the proportion of projects that indicated they would have proceeded on a smaller scale or slower pace.

2.25 The Assessment states the Scheme will only provide funding for specific project-related costs that would otherwise not have been incurred if the project were not to take place in a non-subsidy scenario.[25] It also sets out the application and assessment process to evaluate applications for funding. The Assessment explains that applications will undergo assessment from multiple independent expert assessors and include an assessment of the costs applied for, including their additionality, relevance and appropriateness to the project work. It also

[22] Statutory Guidance, paragraph 3.67.
[23] Statutory Guidance, paragraphs 3.66–3.70.
[24] Statutory Guidance, paragraphs 3.71–3.73.
[25] See footnote 7.

explains that beneficiaries recommended for grant funding will undergo a further financial due diligence review by Innovate UK finance teams, on whether the project-related costs are eligible and appropriate before award of a subsidy.

2.26 The Assessment also explains that successful applicants must sign a grant offer letter with terms and conditions that do not allow subsidies to be used to undertake existing contractual or legal obligations, and that project costs incurred will be monitored by independent monitoring officers and claims will be paid in arrears.

2.27 In our view, the Assessment explains and evidences how the Scheme would change the beneficiaries' economic behaviour and that the Scheme brings about changes that would not have occurred absent the subsidy. However, while the Assessment describes the different assessment stages applications go through, it could use supporting evidence (including examples from previous CMDC and ZEVI competitions) to demonstrate the analysis that will be applied to test each project for additionality.

## Step 3: Considering the distortive impacts that the subsidy may have and keeping them as low as possible

2.28 Under Step 3, public authorities should consider compliance of a subsidy with:

(a) Principle B: Subsidies should be proportionate to their specific policy objective and limited to what is necessary to achieve it; and

(b) Principle F: Subsidies should be designed to achieve their specific policy objective while minimising any negative effects on competition or investment within the United Kingdom.[26]

### Proportionality

2.29 The Assessment explains that each project funded under the Scheme is required to be matched with private investment, with a cap on subsidy intervention rates graduated by size of the organisation. It outlines that projects with a higher-TRL will have a lower subsidy intervention rate.[27] The Assessment explains that organisations' willingness to invest in R&D increases with technological maturity, as more mature technologies carry lower risk and therefore require less subsidy. Specifically in regard to the maximum subsidy intervention rate on capital costs (which is 80%), the Assessment states that this rate is necessary because evidence from previous UK SHORE competitions shows that many projects would

[26] See Statutory Guidance paragraphs 3.75–3.112 and the SAU Guidance, paragraphs 3.14–3.18 for further detail.
[27] See paragraph 1.11.

not be commercially viable without support at this level, and most unsuccessful applicants seeking this rate did not pursue their projects privately.

2.30 The Assessment states the Scheme will cap funding to individual organisations at £25 million per project per organisation. It acknowledges that this is higher than the cap for previous competitions (£20 million), however the Assessment explains that this reflects that some competitions are for higher-TRL projects, that may involve 'on-water demonstrations'. The Assessment states that these higher-TRL projects are likely to have larger costs, therefore may require larger subsidies to proceed.

2.31 The Assessment describes how project funding applications will be assessed on a competitive basis, including how the assessment criteria and the process for prioritising individual projects for funding relate to proportionality. It explains that due diligence checks will assess the project for value for money. The Assessment also outlines that projects with capital costs are verified to determine value for money, including ensuring grants do not subsidise 'business as usual' costs. In addition, the Assessment explains that following assessment by the panel of independent assessors, only the highest-ranking applications (that meet a defined minimum quality threshold, typically set to be a score of 70% or above) will be recommended for funding.

2.32 In our view, the Assessment clearly outlines a number of features that contribute to ensuring the Scheme is proportionate and limited to what is necessary. However, the Assessment should discuss in more detail the extent to which the inclusion of alternative subsidy instruments (such as repayable advances[28] or equity investments) that could reduce the overall level of subsidy required and be less distortive were considered as part of the Scheme's design.

2.33 In addition, while the Assessment sets out parameters that help ensure proportionality of individual subsidies under the Scheme,[29] it could explain in more detail how Innovate UK will assess the proportionality of individual grant amounts, drawing on evidence from previous competitions.[30]

**Design of subsidy to minimise negative effects on competition and investment**

2.34 In line with Chapter 3 of the Statutory Guidance, the Assessment sets out several elements of the Scheme which it considers are relevant to minimising distortive impacts.

[28] A repayable advance involves providing a loan for a project which is reimbursed depending on the outcome of the project.
[29] Such as subsidy intensity rates, maximum subsidy awards and how proposals will be assessed.
[30] For example, see Assessor Scoring Guidance for CMDC 6 Pre-deployment Trials Competition Strand, pages 20 and 21.

2.35 In relation to the nature of the instrument, the Assessment explains that while grant-based subsidies can be distortive, Innovate UK consider this distortion to be minimised by the design of the Scheme which includes a detailed selection and monitoring process for funding, and clear caps on subsidy awards. Regarding the breadth of beneficiaries, the Assessment explains that the Scheme will be available to all UK-based businesses with maritime decarbonisation projects that meet the defined scope of competitions under the Scheme.[31] It also states that segmentation of competitions by TRL will ensure the Scheme supports a broad range of projects.

2.36 Concerning the selection process, in addition to the points set out in paragraph 2.31, the Assessment explains that the final stage of project selection will involve a 'portfolio' assessment which it states will reduce potential distortions from 'over-focusing on specific technologies or approaches'.[32]

2.37 In relation to the size of the subsidy, the Assessment explains that the overall budget of the Scheme is low compared to the overall size of the sector and it also explains that caps on subsidy intensities ensures that prospective projects must leverage private investment, which the Assessment considers will ensure that the Scheme is unlikely to crowd out private investment. The Assessment explains that only project-related costs are eligible to be supported,[33] and that subsidies will be time-limited and awarded for the length of the competition that the beneficiary is participating in.

2.38 In our view, the Assessment demonstrates and evidences a number of design features of the Scheme that contribute to minimising negative effects of the Scheme on competition and investment within the UK.

**Assessment of effects on competition or investment**

2.39 The Assessment provides information on the UK maritime sector and the subsectors within it,[34] and then states that that given the broad scope of subsectors of the maritime sector that will be eligible for the Scheme and the size of its budget relative to the turnover of the sector (stated as over £55 billion), the overall impact on the market is likely to be limited. The Assessment also explains

[31] The consortia lead for all projects must be a UK registered business and must collaborate with other UK registered organisations. The consortium may also include non-UK partners who may undertake project work within their home countries; these costs will count towards the total eligible project costs, but they will not be funded by the scheme. The Assessment states that partners based in the EU will bring their own funding for the project.
[32] In support of this statement, the Assessment explains that 'projects that scored lower but which are focused on a prioritised theme may be funded ahead of projects which scored higher, but which were not focused on a prioritised theme'. It states that prioritised themes will be made clear to applicants prior to application.
[33] See footnote 7.
[34] The Assessment categorises these as shipping industry, port industry, leisure marine industry, marine engineering and scientific industry, maritime business services industry and shipbroking, insurance, finance, legal, and classification. See CEBR, The economic contribution of the UK Marine Engineering and Scientific industry (2022), page 14 for more detail.

that the Scheme is unlikely to have a negative impact on competition across subsectors as the different technologies supported by the Scheme are likely to be complementary (ie they can be used together). The Assessment does acknowledge that there may be some impact on competition within these subsectors and provides examples of how competition might be affected across a range of different technologies.

2.40 The Assessment outlines that the primary market the Scheme is likely to target is the maritime engineering and scientific industry (MES) in the UK. It identifies key UK producers for each MES subsector and outlines that it considers the likely distortive impact of the Scheme in these sectors to be low. The Assessment also draws on evidence from previous UK SHORE competitions to demonstrate that over 500 unique organisations were supported, spread across all regions of the UK. It also states that as MES is a global market, this contributes to limiting the impact of the Scheme on the UK MES industry.

2.41 The Assessment explains that the Scheme is expected to lower barriers to entry in the maritime sector by derisking private investment into potentially transformative technologies, which will support the development of SMEs. It acknowledges that the Scheme may increase barriers to exit by enabling less efficient organisations to remain in the market but that this effect is expected to be limited by the Scheme's due diligence process.

2.42 The Assessment also considers that the impact of the Scheme on related markets such as ports and shipping will be minimal given the size of the Scheme in relation to the size of these markets. It also expects impacts on upstream markets (ie the raw inputs relied on to manufacture technologies) to be minimal as maritime technologies make up a small proportion of total demand for raw inputs. The Assessment also considers that the Scheme may benefit shipping regulation and classification societies in the UK who are responsible for reviewing and classifying new technologies as they are developed.

2.43 In our view, the Assessment clearly considers and evidences the effect of the Scheme on competition and investment, in line with Annex 3 of the Statutory Guidance. However, the Assessment could assess in more detail the scope for distortive impacts of subsidising capital expenditure given that up to 80% of these costs may be eligible for funding.

## Step 4: Carrying out the balancing exercise

2.44 Under Step 4 (Principle G), public authorities should establish that the benefits of the subsidy (in relation to the specific policy objective) outweigh its negative

effects, in particular negative effects on competition or investment within the United Kingdom and on international trade or investment.[35]

2.45 The balancing exercise uses supporting evidence and analysis presented under Steps 2 and 3 of the Assessment to outline both quantified and qualitative benefits and disbenefits of the proposed intervention. For example, it describes quantified benefits such as those outlined at (a) to (d) below as well as qualitative benefits related to reduced costs for vessels operators (linked to switching to alternative technologies to fossil fuels) and reductions in air pollution emissions resulting from decarbonisation. Key quantified benefits the Assessment identifies include:

(a) Accelerated emissions savings;

(b) Returns on R&D investment arising from CMDC/ZEVI;

(c) Jobs retained or created by 2050; and

(d) Forecast leveraged private sector investment.

2.46 The Assessment then identifies a number of key disbenefits of the Scheme, to present both quantified and qualitative potential negative impacts. These include:

(a) Opportunity cost to the UK if the private investment was not directed to R&D but rather to alternative investment;

(b) Costs faced by the maritime sector to install and implement the new technology;

(c) Crowding out of private investment by public investment; and

(d) Potential risk associated with the adoption of alternative fuels under CMDC and ZEVI leading to some negative wider environmental impacts such as ammonia slip or damages to water quality in the event of leakage.

2.47 The Assessment further identifies potential negative impacts relating to competition and investment in the UK such as potential distortion to competition by supporting clean maritime technologies as alternatives to current transitional solutions or risk of crowding out private investment. It also discusses potential impacts on international trade and investment, where the Scheme may lead to a substitution of internationally developed clean maritime technology imports for UK developed technologies. The Assessment also discusses geographic and distributional impacts of the Scheme, such as the potential for large ports or established maritime clusters to benefit disproportionately.

[35] See Statutory Guidance, paragraphs 3.113–3.121 and the SAU Guidance, paragraphs 3.19–3.21 for further detail.

2.48 It explains why these effects are not considered materially significant due to the limited scale of international trade in this sector relative to the UK's total bilateral trade and the increased opportunity for private and international investment afforded by the growth of clean maritime R&D and production in the UK. The Assessment also explains that the size of Scheme has been designed relative to the maritime sector and targeted sub-sectors to minimise distortion and that the use of open competition and independent assessors during the application process is intended to ensure that any such risks are mitigated.

2.49 The Assessment further states that any potential negative impacts arising from the proposed Scheme are expected to be outweighed by its overall benefits and concludes that the Scheme will deliver benefits that would not be delivered in the absence of the Scheme. It concludes that the high value for money evidenced for the Scheme as well as its design is presented as evidence that any potential risks of distorting competition, investment and international trade will be mitigated and that the benefits will outweigh any potential negative effects of the Scheme.

2.50 In our view, the Assessment clearly sets out positive effects of the Scheme, considers its geographic and distributional impacts, as well as potential negative impacts, and conducts a balancing exercise between them in line with the Statutory Guidance.

## Energy and Environment Principles

2.51 This section sets out our evaluation of the Assessment against the energy and environment principles.[36]

2.52 Innovate UK has conducted an assessment of the Scheme against Principles A, B, H, and I. In addition, the Assessment explains why Innovate UK do not consider the other energy and environment principles relevant to the Scheme.

### Principle A: Aim of subsidies in relation to energy and environment

2.53 Subsidies in relation to energy or the environment should be aimed at (1) delivering a secure, affordable and sustainable energy system and a well-functioning and competitive energy market, or (2) increasing the level of environmental protection compared to the level that would be achieved in the absence of the subsidy. If a subsidy is in relation to both energy and environment, it should meet both limbs.[37]

[36] See Schedule 2 to the Act, and Statutory Guidance, Chapter 4.
[37] Statutory Guidance, paragraphs 4.19–4.28.

2.54 The Assessment explains that the Scheme will support research, development and deployment of clean technologies to accelerate emissions reductions across the maritime sector.

2.55 The Assessment explains that maritime shipping represents circa 8% of UK transport emissions annually and the Scheme will accelerate the decarbonisation of this sector, and support progress towards achievement of the government's MDS and the UK's net zero targets.

2.56 The Assessment also explains that the Scheme supports energy efficiency improvements and is expected to deliver significant reductions in greenhouse gas emissions and air pollutants.

2.57 The Assessment acknowledges that the indirect effects of increased demand for clean maritime technologies may include environmental impacts from the extraction of raw materials and the production of alternative fuels. However, it explains that it is expected that any additional emissions from their production and operation will be substantially outweighed by the reduction in emissions from the replacement of conventional fossil-fuelled vessels or other reductions in fossil fuel use.

2.58 In our view, the Assessment provides a reasoned explanation of how the Scheme complies with the environmental limb of Principle A of the Energy and Environment Principles and provides supporting evidence to demonstrate how the Scheme will help increase the level of environmental protection. To make this clearer, the Assessment could draw from supporting evidence and leverage analysis presented under Step 4, such as the estimated emissions savings the Scheme will enable. The Assessment should also explain whether Innovate UK consider the energy limb of this Principle applicable to the Scheme.

**Principle B: Beneficiary's liabilities as a polluter**

2.59 Subsidies in relation to energy or the environment should not relieve the beneficiary from liabilities arising from its responsibilities as a polluter under the law of England and Wales, Scotland, or Northern Ireland.[38]

2.60 The Assessment explains that the Scheme will not relieve any beneficiary from any liabilities arising from its responsibilities as a polluter. It outlines that terms and conditions of grants under the Scheme explicitly require compliance with environmental law, and costs associated with legal liabilities or penalties are not eligible for subsidy support, ensuring that the polluter pays principle is upheld and that the Scheme does not undermine existing environmental protections.

[38] Statutory Guidance, paragraphs 4.29–4.34.

2.61 In our view, the Assessment explains how the Scheme complies with Principle B of the Energy and Environment Principles.

**Principle H: Subsidies for the decarbonisation of emissions linked to industrial activities**

2.62 Subsidies for the decarbonisation of emissions linked to industrial activities should achieve an overall reduction in greenhouse gas emissions, and reduce the emissions directly resulting from the industrial activities concerned.[39]

2.63 The Assessment explains that the Scheme is directly subsidising the decarbonisation of emissions from the maritime sector, described as a significant industrial activity, by funding the development and deployment of technologies that will reduce greenhouse gas emissions in the sector. It further states that the Scheme is compliant with Principle H as it will deliver measurable reductions in greenhouse gas emissions from the maritime industry as well as helping to decarbonise other UK industrial activities by reducing supply chain emissions. The Assessment explains and evidences that the technologies supported by the Scheme, such as zero-emission propulsion systems, shore power and alternative fuels, are designed to replace fossil-fuelled systems or directly reduce emissions and that any emissions associated with production or deployment are 'substantially outweighed' by operational savings.

2.64 In our view, the Assessment provides information on how the Scheme complies with Principle H of the Energy and Environment Principles. However, the Assessment could consider how the Scheme complies with this principle across the range of TRLs that will be supported.

**Principle I: Subsidies for improvements of the energy efficiency of industrial activities**

2.65 Subsidies for improvements of the energy efficiency of industrial activities should improve energy efficiency by reducing energy consumption, either directly or per unit of production.[40]

2.66 The Assessment explains that the Scheme will support a range of interventions intended to improve the energy efficiency of maritime operations (which the Assessment regards as an industrial activity) that would not occur in the absence of the subsidy. It outlines that that that Scheme is compliant with Principle I by enabling technologies that reduce energy use and improve operational efficiency. The Assessment explains that the Scheme is expected to include support for

[39] Statutory Guidance, paragraphs 4.60–4.68.
[40] Statutory Guidance, paragraphs 4.69–4.72.

vessels retrofits, wind assisted propulsion, digitalisation, infrastructure upgrades and technologies that aim to increase energy efficiency. It explains that energy efficiency improvements are integral to the MDS and that they will complement the adoption of alternative fuels by reducing total fuel demand.

2.67 In our view, the Assessment provides information on how the Scheme complies with Principle I of the Energy and Environment Principles. However, the Assessment could consider how the Scheme complies with this principle across the range of TRLs that will be supported.

## Other Requirements of the Act

2.68 Innovate UK confirmed that no other requirements or prohibitions set out in Chapter 2 of Part 2 of the Act apply to the Scheme.

**30 January 2026**