

#### RESEARCH PAPER

#### MESSAGE FROM THE COMMITTEE PRESIDENT

#### Dear Delegate,

Welcome to the research paper we have prepared for you. This is a great starting point for your research.

If you have any questions about this research, please write to us at obsmun@obs.edu.pt

Happy debating and see you soon.

#### **PURPOSE OF THIS GUIDE**

This research guide was compiled by the Secretariat of the OBSMUN 2025. OBSMUN aims to provide delegates with the opportunity to further develop their research skills that will help them in their academics. Thus, these research guides do not cover the whole breadth of the issues at hand. Instead, they are designed to provide a basis from which delegates can undertake their own research into the topics, with the aim of developing clauses from their independent research.

This guide is not sufficient as background information to prepare yourself for the country, since it does not look at the information from your countries point of view, but instead a generalised one.

WHEN RESEARCHING FOR INFORMATION REGARDING YOUR COUNTRY YOU MAY WANT TO ASK YOURSELF THE FOLLOWING QUESTIONS;

- Where does your country stand on the issue being addressed?
- Does it affect the country you are representing?
- Would your country be in favour / against taking action on the issue?
- What policies are currently in place in your country to address this issue?
- Given your country's stance & policies, what type of solution would you support?
- What measures would benefit your country?
- What measures would be detrimental to your country? Which ones would your country be especially be opposed to?

# TOPIC 1: THE ISSUE OF WHETHER THE NAVY SHOULD COMMISSION TWO MORE AIRCRAFT CARRIERS IN RESPONSE TO RISING GLOBAL TENSIONS

Rising global tensions help frame this question. The war in Ukraine has intensified throughout 2025, whilst Houthi attacks in the Red Sea have disrupted shipping and attracted repeated UK and US strikes. Over in the East, the Chinese military continues modernising. These developments open the question of whether the UK's maritime forces are sufficient.

The United Kingdom (UK) operates two Queen Elizabeth-class aircraft carriers within the Royal Navy (RN). They are designed for short take-off and vertical landing (STOVL) operations with the F-35B Lightning II and regularly takes on Merlin helicopters for anti-submarine warfare (ASW) and airborne early warning (AEW). The National Audit Office (NAO) recorded the carrier build cost at about £6.4 billion, 3% above the revised 2013 budget, whilst also highlighting the importance of supporting capabilities.

AEW is delivered by the Merlin-based Crowsnest system. After delays, Crowsnest achieved full operational capability (FOC) in spring/summer of 2025; currently, the technology is to be suspended at the end of 2029, to be replaced by a successor. This is important because carrier survivability hinges on surveillance and control against aerial and missile-based threats.

Carrier air wings depend on the UK F-35 programme. The Ministry of Defence (MoD) has 48 F-35Bs contracted in the first batch, however deliveries were delayed and are now forecast to complete by April 2026. An NAO report in July 2025 states that internal MoD plans envisage an additional 27 aircraft in the period of 2030 to 2033, as well as at least 12 F-35A (the land-based variant) for the North Atlantic Treaty Organization (NATO) Dual-Capable Aircraft role, alongside additional F-35B. Availability and weapons integration remain constraints.

The RN indicates the carriers can embark up to 36 F-35B at full capacity, with typical deployments lower. Recent planning points to air wings of around 24 jets for full Carrier Strike. Historic CSG21 (Carrier Strike Group 2021) sailed with 18 F-35B from the UK and US Marine Corps.

A carrier strike group (CSG) is only useful if its escorts and logistics are up to scratch. The House of Commons Library's May 2025 briefing records six Type 45 destroyers and eight frigates in service after early retirements, with Type 26 and Type 31 frigates under construction to replace Type 23s. It notes that as of April 2025 only six frigates were at readiness and highlights concerns about gaps in capability whilst new ships arrive. The Royal Fleet Auxiliary (RFA) support is also limited. There is one Fort-class solid stores ship, waiting for three new Fleet Solid Support (FSS) ships.

The FSS programme, run by Team Resolute (Navantia UK, Harland & Wolff, BMT), moved through the design process in 2024, with production beginning in 2025 across UK yards and final assembly being in Belfast. Government and industry updates indicate the first ship is expected to enter service around 2031, with all three ready in the early 2030s.

They are a key dependency for sustained carrier operations at range.

Industrial capacity outlines timing and cost. Rosyth is heavily loaded with the Type 31. The HMS Venturer rolled out in May 2025 and continues outfitting. Additional milestones followed in August. Extra carrier construction could put additional strain on skills, dry dock access and supply chain throughput already committed to frigates and auxiliaries.

Costs extend beyond hulls. The NAO's 2020 carrier review cautioned that running, upgrade and enabling costs were not fully baselined, risking strain on an already pressured equipment plan. Its 2025 F-35 report similarly notes availability shortfalls, engineering workforce gaps and delayed integration of key weapons such as the SPEAR 3 and Meteor, factors which directly affect the fighting power carriers can deliver.

Strategic context includes defence funding. In February 2025 the Prime Minister confirmed a commitment to raise defence spending to 2.5% of gross domestic product (GDP) from April 2027, with an ambition to reach 3% in the next Parliament, while NATO estimates put UK defence at 2.3% of GDP in 2024.

Threats to large surface combatants have evolved. China now fields anti-ship ballistic missiles such as the DF-21D and DF-26, expanding the area-denial possibilities. Western assessments emphasise the need for layered integrated air and missile defence (IAMD) to protect high-value units. The UK's own debate on IAMD is active, with analysis from the Royal United Services Institute (RUSI) and parliamentary briefings outlining options and gaps. These factors influence

requirements for escorts, sensors, decoys, and long range stand-off weapons around carriers.

Operationally, the RN employs a maintenance—training—deployment cycle designed so that two carriers yield at least one at high readiness, demonstrated by deployments through 2021 and the 2025 Indo-Pacific mission by HMS Prince of Wales. The carrier programme also increasingly experiments with uncrewed systems alongside F-35B, lessons from Ukraine and the Red Sea on mass, ISR (intelligence, surveillance and reconnaissance) and strike.

Manpower, training and stockpiles are also recurring constraints. The Commons Library highlights fleet size and readiness issues due to retirements. NAO points to engineering shortages in the F-35 enterprise and notes that even meeting FOC criteria will not immediately yield a sustainably deployable force without improvements in availability, munitions and accommodation.

In conclusion, the factual landscape for considering two additional carriers is defined by the following: the current carrier pair's STOVL design and recent AEW FOC; an F-35 pipeline expanding beyond the initial 48, with a stated intent to add F-35A for NATO nuclear tasks and to grow F-35B numbers, though availability and weapons integration remain in progress; escort numbers and RFA logistics that are stretched until Type 26/31 and FSS ships deliver in the early 2030s; industrial loading at Rosyth and other yards; NAO-flagged through-life costs and enabler risks; a defence budget glide path to 2.5% of GDP by 2027 and a threat environment of cruise and ballistic missiles that pushes IAMD and long-range strike requirements.

## TOPIC 2: THE ISSUE OF RAISING THE ANNUAL BUDGET FOR THE UKSA (UK SPACE AGENCY) BY REDUCING DEFENCE BUDGET

Rising global tensions also set the scene for this Issue. The war in Ukraine has kept Europe's on its toes, as have crises in the Middle East, including attacks affecting Red Sea shipping and subsea infrastructure. These conflicts have shown how quickly commercial and governmental systems can be stressed. Across all of this, space-enabled services allow for navigation and communication. That is the context for considering whether to raise the annual budget for the UKSA (United Kingdom Space Agency) by reducing parts of the defence budget.

The UKSA (United Kingdom Space Agency) is the United Kingdom's civil space body. It sits within the DSIT (Department for Science, Innovation and Technology). In recent years, the UKSA has administered roughly six hundred million pounds per annum across grants, national missions, and international contributions. The majority of that flows to the ESA (European Space Agency) through multi-year "optional programme" subscriptions in areas such as Earth observation, telecommunications, navigation, exploration, and technology. ESA gives a share of contracts to domestic firms roughly in proportion to a member state's contributions. In other words, a higher contribution to the ESA by the UK would lead to more work for UK companies, subject of course to competitive bidding and capability.

The home market is however broader than the UKSA alone. The civil space economy encompasses upstream manufacturing (satellites, payloads, launch systems), inorbit services, and downstream applications (navigation, Earth observation analytics, satellite communications services). The UKRI (United Kingdom Research and Innovation) and Innovate UK fund a share of this through research and innovation grants, while departments that consume space services, those being transport, environment, energy, emergency response, also bring activity. An uplift to the UKSA could therefore be configured to increase ESA contributions, expand national missions (for example, climate and disaster response payloads, in-orbit servicing demonstrators) or the increase in budget can help scale matched-funding lines that bring in private investment.

Oversight is also an issue. NAO (National Audit Office) has previously noted that DSIT did not have full visibility of total civil space spending across government. That fragmentation makes it harder to say what the "civil space budget" actually is at any point in time, and makes it harder to track results across multiple funding channels. If the UKSA's budget were to be raised, a parallel decision on reporting standards, evaluation timelines, and crossgovernment data sharing will be needed so that Parliament can see what the extra money buys, and whether it is spent as intended.

Defence is the proposed source of funding for this change, and so its structure has to be stated clearly. The MoD (Ministry of Defence) manages two main pots of cash. Resource (people, training, operations, maintenance, stockpiles) and Capital/Equipment (procurement and

upgrades). United Kingdom defence spending currently sits above the NATO (North Atlantic Treaty Organization) 2% baseline, with policy indicating a move towards 2.5% of GDP (gross domestic product) by the latter half of the decade. Within the MoD, space defence is delivered by the UK Space Command under the Defence Space Strategy. Major lines include SATCOM (satellite communications) under Skynet 6, space domain awareness sensors and data, and space-based ISR (intelligence, surveillance and reconnaissance).

Civil and defence space agencies are distinct, but interdependent in practice. Commercial SATCOM, navigation signals, and Earth observation products support shipping reroutes, insurance assessments, climate monitoring, and emergency management. Military SATCOM and ISR support deployed forces and allied operations. The Red Sea and Ukraine have both shown how civil and military actors lean on space at the same time for different purposes. A change in either civil or defence budgets could therefore produce effects across the other.

ESA contributions are agreed at ministerial meetings and broken into optional programme "bins." The United Kingdom can increase its stake in selected bins to align with national priorities. For example, Earth observation missions that improve climate services, telecommunications programmes that improve optical inter-satellite links, or technological lines that advance on-orbit manufacturing and servicing. National UKSA programmes can focus on improving domestic launch readiness, small-sat constellations for data used for the good of the public, and skills pipelines across universities and industry.

Absorption capacity also matters. A budget increase that arrives faster than the sector can absorb will sit in unspent allocations or chase too few qualified bids. The UKSA and DSIT would need to publish a schedule of competitions and mission starts, with realistic delivery milestones and a staged ramp so companies can hire, train, and invest in order to make use of the funds.

On the defence side of things, we can reduce the budget of a few things. Cutting Resource reduces training days, spares, availability, and the ability to hold people in service. That could be felt within months if the impact was severe. Cutting Equipment impacts procurement programmes. The time profile matters too.

Geography is also part of the decision. Civil space clusters, in areas like the South-East, the South-West, the Midlands, Scotland, Northern Ireland and Wales, would likely end up working more because of the increase in budget, whether through ESA return contracts or national missions. Reductions in defence budgets, on the other hand, would be felt where shipbuilding, aerospace, land systems, and munitions production are based.

Raising the UKSA's profile at ESA also demonstrates a stronger civil leadership posture in Europe and could increase the UK's influence over programme design. Reducing the MoD's budget, even marginally, will also be seen by NATO allies against the backdrop of a European war, unless the 2.5% trajectory is preserved through other measures, and therefore could raise issues.

In summary, the issue reduces to a set of facts and mechanics. The UKSA is a civil agency administering on the order of six hundred million pounds a year, most of it via ESA subscriptions that purchase participation and

industrial return rights. DSIT is consolidating oversight, but NAO has flagged cross-government visibility as a weakness to fix. The MoD budget is moving up, with defence space delivered by UK Space Command and significant multi-year commitments in SATCOM, space domain awareness, and ISR. The external environment, being Ukraine, the Red Sea, and wider strategic competition, keeps demand high for both civil and defence space services.

### Should the UK provide further incentives to renewable energy startups in order to establish the UK as an important player in the industry

The question is whether the United Kingdom (UK) should add further incentives for renewable-energy startups to establish the UK as a serious player in the sector. The backdrop is simple. Energy security tightened after Russia's invasion of Ukraine. Global competition for clean-tech supply chains accelerated. Capital is moving to jurisdictions that signal clear, bankable support. If the UK wants a larger share of firms, factories, and intellectual property, incentives must target the specific constraints startups face from idea to scale.

Governance and market frame first. Energy policy sits with the Department for Energy Security and Net Zero (DESNZ). Economic regulation sits with the Office of Gas and Electricity Markets (Ofgem). System planning and network operation transition to the Future System Operator (FSO) from the current Electricity System Operator (ESO). For utility-scale generation the Contracts for Difference (CfD) scheme provides price certainty that lowers financing costs. Early-stage companies seldom bid into CfD directly, yet a credible offtake regime underpins the customer base they sell into.

Define scope. "Renewable-energy startups" here means new firms working on onshore wind, fixed and floating offshore wind, solar photovoltaic (PV), tidal stream, geothermal, advanced bioenergy, green hydrogen and electrolysers, long-duration energy storage (LDES), grid flexibility and digitalisation, and enabling power electronics and controls. Their needs differ from software ventures. They need sites, permits, grid access, hardware supply chains, and risk-tolerant capital. Incentives must map to those needs, not generic innovation slogans.

Finance is the first bottleneck. Most climate hardware follows long development cycles, heavy prototyping costs, and lumpy capital expenditure. Traditional venture capital underfunds these profiles. A UK package should combine: early non-dilutive grants for feasibility and prototypes; milestone-based demonstrator funding; and public coinvestment alongside private equity for pilots. The British Business Bank (BBB) and the UK Infrastructure Bank (UKIB) can anchor blended vehicles that share risk with institutional investors. Research and development (R&D) tax relief should remain predictable and easy to claim for small and medium-sized enterprises. Capital allowances should cover pilot plants and test rigs. For exporters, UK Export Finance (UKEF) guarantees de-risk first overseas orders.

Markets are the second bottleneck. Startups survive if someone pays for the service their technology enables. Policy should define bankable revenue for flexibility and storage, not only energy. Options include revenuestabilisation for LDES and standardised, multi-year

contracts for grid services so small providers can finance assets. Within CfD, innovation "pots" for nascent technologies such as tidal stream and floating wind maintain a path from demonstration to commercial orders. Distribution-level markets for local flexibility must be scaled and standardised so digital startups can sell optimisation and demand response without negotiating bespoke contracts with each network operator.

Grid connection is the third bottleneck. Connection queues delay projects for years and kill young firms. Queue management should prioritise readiness and remove dormant projects. Anticipatory investment in networks should be enabled where future demand is certain. Distribution network operators (DNOs) and the FSO should publish granular heatmaps and forward plans so pilots locate where they can connect in months, not years. Open data is part of the fix. Standard application programming interfaces (APIs) for constraint, pricing, and availability reduce search costs and let startups build services that integrate with system needs.

Planning is the fourth bottleneck. Onshore wind and solar PV benefit from clear national policy, standardised environmental baselines, and statutory decision timelines. Marine licensing for small tidal and wave arrays should be proportionate to risk. Offshore leasing should keep a predictable cadence, with pre-surveyed zones and coordinated transmission planning. Predictability lowers the cost of capital throughout the supply chain. Startups that supply blades, moorings, foundations, sensors, software, and services need a steady pipeline of auctions and leases to hire and invest.

Skills are a rate limiter. Priority roles include high-voltage electrical work, power electronics, welding and composites, blade manufacture and repair, marine operations, data science for energy management, and hydrogen safety. Apprenticeships aligned to regional clusters matter more than national slogans. Short modular courses help oil-and-gas workers transition to offshore renewables. Targeted visas for shortage occupations close gaps that training cannot fill on the required timeline. Without people, incentives sit unspent.

Industrial geography should be used deliberately. Cluster support concentrates benefits and reduces logistics costs. Obvious locations include the Humber and Teesside for offshore wind and hydrogen; the North-East and Midlands for power electronics and drivetrains; the Celtic Sea, Grampian and the Solent for floating wind and marine operations; South Wales and Northern Ireland for composites and fabrication. Place-based incentives should match local capability and avoid forcing supply chains where they do not fit.

International competition is real and immediate. The United States Inflation Reduction Act (IRA) offers longdated tax credits with simple eligibility. The European Union (EU) combines relaxed state-aid rules with its Green Deal Industrial Plan and the Carbon Border Adjustment Mechanism (CBAM). These regimes are predictable, multi-year, and administratively simple. UK policy must be similarly stable and easy to use or factories and engineering teams will scale elsewhere. Startups often follow their earliest anchor customers. Winning a few lighthouse deployments at home pulls in suppliers and talent.

Measurement and accountability keep programmes honest. Set metrics up front: private coinvestment leveraged per public pound; number of certified components entering utility-scale supply chains; time to connection for pilots; survival and scale-up rates at three and five years; export revenue; patents and standards contributions; jobs created in priority skills; and cost-of-capital reductions attributable to revenue support. For system outcomes, track additional renewable capacity enabled, flexibility procured from new providers, curtailment avoided, and emissions reduced. Publish these quarterly. Close schemes that underperform and scale those that work.

Manage risk by design. Poorly targeted subsidies create deadweight, pay incumbents for business as usual, or tilt too early toward a single technology. Complexity deters small teams without grant writers. Short, one-off pots create a boom-and-bust cycle. To avoid this, keep the number of schemes low, rules-based, and technology-neutral where possible. Use competitive processes with transparent scoring criteria focused on additionality, scalability, domestic capability, and whole-system value. Require cost-share to crowd in private capital at each stage.

Align adjacencies. Heat, transport, and industry policies drive electricity demand and flexibility needs. Signals for heat pumps, building efficiency, and electric-vehicle (EV) charging should line up with renewable build-out and storage plans. Coordination with carbon capture, utilisation and storage (CCUS) and interconnectors prevents stranded assets and gives startups a clear map of where their products fit. Many promising companies sit at these interfaces: heat-as-a-service, vehicle-to-grid, industrial

flexibility, carbon-aware operations, and grid-friendly charging.

Public consent is an operational constraint, not a communications afterthought. Onshore wind, solar PV, substations, overhead lines, hydrogen facilities, and storage need communities on side. Share benefits locally through bill discounts, community ownership stakes, or neighbourhood funds. Set clear design standards and biodiversity net-gain rules so developers and planners work from the same expectations. Fast, predictable decisions lower risk and cost throughout the chain.

Universities and catapults convert research into products. Fund translational facilities where startups can test blades, electrolyser stacks, control systems, and grid integration. Create regulatory sandboxes so firms can trial new services in live markets under supervision. Standardise public-sector procurement templates and use outcome-based tenders that pay for verified flexibility or performance rather than specifying equipment. This opens routes to market without freezing innovation.

Put the pieces together into a definition of "further incentives." It is not only larger grant totals. It is a coordinated, multi-year package that de-risks first projects, cuts soft costs, accelerates connections, builds skills, and anchors exports. Concretely: scale early-stage grants and demonstrators; launch blended finance with BBB and UKIB; standardise long-term contracts for flexibility and LDES; clear the connection queue with readiness-based rules and anticipatory investment; lock in a predictable cadence for CfD innovation pots and offshore leasing; publish cluster-specific skills plans and visa routes; and

hard-wire metrics and quarterly reporting. Keep administration simple. Keep timelines public.

If the aim is to establish the UK as a meaningful player, the decisive variables are stable policy, quick paths through planning and grid, patient capital at scale, skilled labour available when needed, and a steady drumbeat of procurement that young firms can sell into. Design incentives against those variables and the sector grows. Miss them and the talent and factories grow somewhere else.