

All-Party Parliamentary Group on ClimateTech 2025 Inquiry

UK Net Zero Ambitions 'Gridlocked' by Fossil-Era Regulations

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All Party Parliamentary
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Foreword by Edward Morello MP, chair of the ClimateTech APPG.

Climate technology is a £42 billion industry. As the Chair of the All-Party Parliamentary Group (APPG) on ClimateTech, I have the privilege of frequently interacting with a sector that is essential not just for our economic growth, but for our ability to meet the defining challenge of our time: the transition to net zero. In the sessions held throughout 2025, I have seen the extraordinary ingenuity of British entrepreneurs, from those pioneering the circular economy to those equipping households and businesses with the means to cut bills and carbon.



The ClimateTech APPG is committed to celebrating this sector and maximising its impact on economic growth, energy security and net zero. We want the UK to be the best place in the world to start and scale a ClimateTech business, launch breakthrough technologies, and to attract global investment. It was because of this goal that we launched our first Inquiry in 2025, *Gridlocked: Unblocking the Path for Climate Innovation*.

As this summary report makes clear, our current regulatory landscape is acting as a brake on the ambitions and potential of the ClimateTech sector.

Our findings reveal a sector currently "gridlocked" by outdated, fossil-era regulations and institutional silos. Innovators face difficulty in accessing capital, a patchwork of inconsistent regional rules, a "wait-and-see" environment created by policy reversals, and a public procurement system that remains too risk-averse to embrace novel solutions. Perhaps most urgently, the evidence highlights a growing "international pull factor." With the remnants of the US Inflation Reduction Act and the EU's evolving frameworks luring our brightest talents, we face a quiet crisis: if we remain sluggish, we risk exporting the very jobs and intellectual property that should be powering our own domestic economy.

The ambition of this report is to move ClimateTech from the margins of our policy-making to the centre. Our recommendations including the creation of a ClimateTech "Frontdoor" within the Regulatory Innovation Office and the unlocking of public datasets provide a pragmatic roadmap to turn the regulatory "red lights" green. By embedding innovation fellows within our regulators and maintaining long-term policy consistency, we can provide the market signals necessary to unlock the private capital currently sitting on the sidelines.

Delivering this vision will require a joint effort. On behalf of the APPG, I want to thank every organisation that contributed evidence, our secretariat at Startup Coalition, and my parliamentary colleagues across all parties. This inquiry marks the beginning of a necessary new phase of engagement between Government and the tech sector.

The window for UK leadership is open, but it will not stay open indefinitely. We must act now to ensure our regulatory environment is as agile and forward-thinking as the innovators it serves. By doing so, we can ensure that the UK doesn't just meet its climate targets, but thrives as a global leader in ClimateTech.

Edward Morello, Liberal Democrat MP for West Dorset and Chair of the All-Party Parliamentary Group for ClimateTech

Executive Summary

Last year the All-Party Parliamentary Group (APPG) on ClimateTech launched an inquiry titled, *Gridlocked: Unblocking the Path for Climate Innovation*. The Inquiry examined how the UK's regulatory landscape affects ClimateTech innovation. A total of 30 organisations submitted written evidence, with an additional 39 contributing across five public sessions held by the APPG throughout the year including 16 organisations that participated in the dedicated evidence session on Regulatory Innovation Sandboxes held on 14th of October, painting a clear picture: despite the dynamism of the UK's £42 billion ClimateTech sector, outdated and fragmented regulations are creating bottlenecks that hinder the pace of climate innovation.

The evidence revealed that while the UK's £42 billion ClimateTech sector is vibrant and growing, outdated and fragmented regulations are creating barriers that inhibit innovation and market uptake. Respondents highlighted a range of issues: fragmented and inconsistent rules across regions and sectors; limited access to regulatory sandboxes for experimentation; risk-averse and under-resourced public procurement; and a lack of coordination between departments and regulators. In addition, several innovators pointed to problems accessing government subsidy schemes due to outdated eligibility requirements and excessive bureaucracy. These obstacles are compounded by policy delays and reversals that undermine market confidence and discourage investment.

Despite these challenges, there are clear, actionable solutions. The APPG's recommendations reflect their insights and aim to address both systemic and specific barriers. Key proposals include:

- Set up a dedicated contact point for climate tech companies to get help navigating government and regulations in one place
- Create ready-made procurement templates so it's easier for the public sector to buy from ClimateTech.
- Build a central hub to coordinate "sandboxes" - controlled environments where new technologies can be tested without having to meet all the usual regulatory requirements straight away
- Bring innovation specialists into regulatory bodies to help them work in more flexible, modern ways
- Open up government-held data so businesses and researchers can make better use of it through initiatives like Smart Data and the National Data Laboratory;
- Keep policy stable and predictable so companies can plan and invest with confidence and
- Help UK climate tech firms sell their products and services abroad by getting UK Export Finance and the British Business Bank working more closely together

Together, these reforms would unblock the regulatory gridlock currently stalling progress. By embracing regulatory innovation, the UK can empower ClimateTech to scale, unlock investment, and accelerate its transition to a low-carbon economy.

Introduction

Mitigating and adapting to climate change demands urgent innovation, and the UK has no shortage of entrepreneurs rising to the challenge, ranging from clean energy and electric mobility, to AI-powered efficiency tools and nature-based solutions. However, innovation can only thrive if the regulatory environment enables it. In 2025, the ClimateTech APPG launched the “Gridlocked: Unblocking the Path for Climate Innovation” inquiry to investigate how current UK regulations and policies are supporting or hindering the development, deployment, and scaling of ClimateTech startups. The goal was to identify the regulatory barriers that are putting the brakes on climate-focused innovation, highlight best practices where things are working, and develop actionable recommendations to help unlock ClimateTech’s contribution to the UK’s net-zero and climate resilience targets.

In mid-2025, the APPG issued an open call for evidence inviting input from all corners of the ClimateTech ecosystem, startups and scaleups, investors, industry bodies, academics, regulators, and civil society.

This diverse input has been invaluable in understanding the multifaceted challenges at the intersection of innovation and regulation. This report synthesises the evidence around a set of thematic findings that emerged repeatedly: regulatory fragmentation, barriers to experimentation, regional and procurement issues, market entry friction, institutional obstacles, and investment confidence.

Finally, the report presents policy recommendations reflecting both stakeholder suggestions and the APPG’s analysis of how to remove these roadblocks. The tone throughout is intended to be constructive and pragmatic, recognising the need to maximise consumer protection and safety, taxpayer value, and the environment while accelerating the ClimateTech innovations critical to achieving net zero, maximising the economic growth potential of these technologies, and positioning the UK as the leader of ClimateTech.

Methodology

The inquiry's findings are drawn from evidence submissions received in response to the APPG's Call for Evidence. In total, the APPG received 30 written submissions, including detailed reports from ClimateTech startups, joint submissions from industry coalitions, regulators and input from established organisations. Each submission was reviewed and coded for common themes and specific examples.

The inquiry questions spanned general context; company activities and climate impact, specific regulatory challenges by sector and innovation stage, regional differences, institutional issues, investment impacts, and recommendations for change. Not every respondent answered every question, and some provided additional case studies or annexes. No personal or confidential information is published in this report. The report team grouped evidence under the six thematic areas and selected representative quotes and case examples for inclusion. Where multiple stakeholders raised similar points, the report cites a notable source and also reflects broader consensus.

It should be noted that this inquiry was conducted primarily through written evidence, alongside a single oral evidence session, held on 14th of October 2025. We invited a diverse range of participants - ranging from, National Grid, Ofwat, and ClimateTech innovators in retrofit, mobility etc.

In addition, the APPG reflected on insights gathered from a series of thematic evidence sessions held throughout 2025. These sessions examined innovation and regulatory barriers across key ClimateTech sectors, including carbon markets, low-carbon energy generation, the built environment, and agriculture and food production. Taken together, these sessions provided a broader cross-sector perspective on the regulatory challenges facing climate innovators in the UK.

The APPG appreciates the candid input from startups on the frontlines of innovation, which grounded this report in real-world experience. The next sections detail the findings by theme, followed by case studies and the recommendations that flow from the evidence.

Thematic Findings

Investment and Market Confidence

The first theme is how regulatory factors are affecting investment and investor confidence in UK ClimateTech. The evidence painted a picture of investors who are increasingly climate-conscious and have large pools of capital that could be available, but who are held back by regulatory uncertainty and a lack of clear market signals. Simply put, policy risk is translating into financial risk in the eyes of funders, raising the cost of capital or driving it elsewhere. Many startup respondents shared the difficulties they face in raising growth funding or securing commercial partnerships under current conditions. A recurring point was that instability or ambiguity in regulations makes investors nervous.

For example, a retrofit company that had investors lined up for a £70 million infusion said those investors were spooked by the government's inconsistent support – specifically, delays in releasing grant funds and the postponement of expected regulations created enough uncertainty that the investment was put in doubt. The company described climate tech investment as heavily “dependent on regulation,” and lamented that the government “flip-flops on standards, which kills private demand” and by extension private investment. This sentiment was echoed in different ways by others: when policy is one step forward, two steps back, financiers become reluctant to back ventures whose success depends on future rules or government programmes.

A micromobility startup illustrated this in their sector. They explained that to commit long-term capital to things like building secure parking docks or hiring local staff, they need assurance that a city's scheme will continue for years – but instead they often get 12-month trial extensions or can be terminated on short notice, making any long-term investment unjustifiable. That uncertainty “makes it difficult to plan for the long term” and slows the rollout of upgraded vehicles or new services. In essence, regulatory uncertainty shortens the investment horizon: investors in this micromobility startup will limit exposure or demand higher returns to compensate for the risk that regulations could suddenly change or a market might vanish.

For more digitally oriented ClimateTech companies, the concern was often around standards and consumer protection rules that are still evolving. One submission noted that even for “digital ClimateTech companies, uncertainty around green-claims regulation complicates marketing strategies and valuations,” with the result that “much-needed capital flows instead to ‘safer’ jurisdictions”. This refers to the fact that rules about how companies can claim carbon neutrality or market green products are not fully settled in the UK, so startups worry that they could invest in branding or products that later run afoul of new guidelines. An investor would see that as an added risk to the business model. Meanwhile, places like the EU, with clearer taxonomies

and disclosure rules, or the US with stable incentive programs, might appear safer for investment because the rules of the game are more established.

Another angle is the opportunity cost of slow regulation. As one submission put it, if the UK doesn't codify frameworks for things like climate risk or carbon accounting that investors increasingly expect, then investors will prefer markets that do. AI ClimateTech startup mentioned that their investors and partners operate globally, and if UK policy isn't keeping pace with global standards, those investors will direct resources to countries where these innovations are recognised. This creates a scenario where UK startups might have to relocate or focus on other markets to satisfy their funders' expectations. Brexit and international competition came up as well. One respondent bluntly stated that being outside the EU has made some international VCs less willing to invest in UK-headquartered companies.

Additionally, the U.S. Inflation Reduction Act (IRA) – a massive package of climate tech subsidies – was cited as a game-changer that makes the US a magnet for funding. This isn't a UK regulatory issue per se, but it dramatically raises the bar for what the UK must do to attract and retain ClimateTech investment. If a startup can get easier funding and customers under IRA incentives in America, UK policy needs to be all the more certain and supportive to compete for that startup's attention. The inquiry also learned that lack of finance mechanisms for early deployment is an investment barrier peculiar to climate infrastructure.

A solar-as-a-service company, highlighted that, for hardware-heavy models, scaling requires debt financing, but banks won't lend at the small scale or early stage, creating a valley of death between venture capital and traditional project finance. If the government steps in with guarantees or helps aggregate projects to a financeable scale, it could unlock private debt capital and reassure equity investors that there's a route to scale. Some respondents suggested ideas like a publicly backed Climate Infrastructure Bank or expanding the British Business Bank's remit to cover climate project finance. A publicly backed Climate Infrastructure Bank would fill a gap that no private institution is currently willing to cover, providing long-term, patient capital for first-of-a-kind deployments where the technology is proven but the financial risk remains too high for conventional lenders. If a standalone institution is not immediately feasible, expanding the British Business Bank's remit to explicitly cover climate project finance would be a credible and deliverable first step. This dovetails with recommendations for blended finance to de-risk investments.

In summary, the evidence on investment conveyed a clear message: investors need clarity and confidence, which only the government can provide through policy stability and supportive frameworks. When the rules are clear and consistent, capital will flow – as seen in segments like offshore wind, where long-term contracts provide certainty. When the rules are uncertain or keep changing, capital either stays on the sidelines or goes to other countries.

The APPG notes that this is perhaps the most urgent area for policymakers to address, because innovation follows investment. If we get the regulatory signals and incentives right, the private sector will scale up ClimateTech solutions and drive costs down. If we don't, innovations will remain small pilot projects or move overseas, and the UK will miss out on both carbon reductions and economic opportunities.

Barriers to Experimentation and Sandbox Access

Innovators repeatedly told the inquiry that “testing the untested” is far more difficult than it needs to be in the UK. Unlike some countries that offer dedicated innovation sandboxes or trial licences, the UK's avenues for trying new ClimateTech solutions in vivo are limited and siloed. This creates a Catch-22: regulators want proven solutions before changing rules, but innovators can't prove solutions without a way to pilot them under real conditions. Several submissions called for more regulatory sandboxes to enable experimentation. An AI ClimateTech reported that there are currently “no interoperable testing environments” where a ClimateTech innovator can work jointly with regulators and stakeholders in a low-risk setting. Sandbox schemes exist in theory in some domains, “but rarely accommodate complex, cross-sectoral infrastructure” – exactly the kind of innovations that ClimateTech often entails.

In practice, a startup aiming to trial a new circular economy platform or energy market tool must approach multiple regulators separately, which is cumbersome and discouraging. The message was that existing sandbox initiatives are too narrow, and there is no “one-stop” sandbox for cross-cutting climate solutions. Several respondents referenced the Financial Conduct Authority (FCA) sandbox as an inspiration. That sandbox allowed fintech firms to trial new apps and services with real customers in a supervised environment, accelerating product validation. An AI ClimateTech startup noted that the FCA's approach “reduced regulatory uncertainty and built investor confidence,” with over 150 firms participating and helping establish London as a fintech hub. They argued that climate-focused sectors would benefit from a similar model: a ClimateTech sandbox where companies could get early regulatory input, test prototypes, and demonstrate outcomes without the full weight of compliance upfront. This would not mean suspending safety or consumer protections wholesale – rather, it means regulators giving time-limited, closely monitored permissions for trials, and working alongside innovators to learn from them. According to a Climate B2B technology startup, such signals that the UK is “open and supportive” of ClimateTech experimentation would shorten pilot-to-market cycles and encourage greater private investment.

We did hear about some positive developments. Ofwat's submission described how the water regulator has implemented a form of sandbox within its £200m Innovation Fund programme. Recognising that water companies bound by strict performance targets might be reluctant to take risks, Ofwat created a mechanism for case-by-case regulatory exemptions – effectively allowing a company to temporarily set aside a regulatory requirement to pilot an innovative project. Safeguards ensure standards are upheld while giving

novel ideas a chance to prove themselves. This approach, as Ofwat explained, “acts as a sandbox within the performance framework” and has already been used to, for example, work through Drinking Water Inspectorate rules that were hindering new treatment technologies. The lesson is that even in heavily regulated sectors, regulators can find room to flex requirements in a controlled way to support innovation.

Stakeholders suggested other regulators could adopt similar sandbox or “trial waiver” programs. Ofgem was frequently mentioned in this context, given energy innovators’ struggles. A striking example of a missed sandbox opportunity came from the transport sector. This micromobility startup and other micromobility operators have been participating in government-sanctioned e-scooter trials running in various cities. While these trials have been valuable to gather safety and usage data, they remain the only legal way to operate e-scooters – effectively a sandbox that has been opened but not graduated. This micromobility startup pointed out that the trials’ “temporary nature” prevents e-scooters from being treated as a mainstream option and discourages companies from fully investing in better vehicles or infrastructure.

In other words, the sandbox has no exit: operators and councils are stuck in pilot mode for years, with uncertainty as to if or when a permanent regulatory framework will be enacted. As this micromobility startup argued, the absence of a path to general legalisation keeps e-scooters in limbo – innovators can’t scale up or integrate with city transport plans, and many potential benefits are unrealised. The takeaway here is that experimental trials are useful, but failing to translate trials into policy is itself a barrier.

A more enabling approach would be to use trial evidence to promptly establish clear standards, so proven innovations can move from sandbox to scale. A startup put forward concrete ideas to institutionalise experimentation in the energy sector. In its evidence, this startup recommended piloting an “Infrastructure Innovation Sandbox” specifically for climate-aligned infrastructure projects. Modelled on the FCA Fintech sandbox, this would allow quick, small-scale testing of new integrations – for example, injecting a synthetic fuel into a gas grid segment under pre-approved safety and data protocols. The goal would be to reduce early-stage friction, permitting, liability concerns, etc. without compromising safety or reliability. From this perspective, coming from a startup that attempted to trial a new clean energy project, is that the current system expects innovators to navigate full regulatory approvals often designed for large incumbents even just to test a concept.

A sandbox could cut through that by pre-negotiating certain conditions, thereby lowering the barrier to experimentation. Beyond formal sandboxes, respondents also highlighted the need for better access to real-world test environments in general. This includes access to public datasets, demonstration sites, or living labs where innovators can trial technology with community involvement. While not always a “regulation” in the strict sense, the support or lack thereof that public bodies provide for pilots can determine success. On this front, innovators cited occasional bright spots, for example local innovation competitions or

testbeds – but these are ad hoc. A more systematic approach, perhaps coordinated by the proposed ClimateTech Front Door in RIO could identify priority areas for trials and provide a clear interface for companies to propose pilots.

In summary, the evidence showed that UK ClimateTech innovators often struggle to test innovations under current rules. The APPG finds that expanding sandbox schemes and trial permits, and crucially, ensuring successful trials inform timely regulatory updates, will significantly improve the innovation ecosystem. The payoff is a faster, safer route from invention to impact, maintaining public trust while allowing bold ideas to flourish.

Regulatory Fragmentation and Uncertainty

A dominant theme was that fragmented, inconsistent regulations and shifting policy goals are creating uncertainty that stifles ClimateTech innovation. Contributors described a regulatory patchwork in which rules can vary dramatically by sector or region, leaving innovators to navigate a maze of requirements – or pause projects until clarity emerges.

An AI ClimateTech startup building data infrastructure for the circular economy, vividly illustrated fragmentation in waste management rules. They noted that waste and recycling regulations “remain fragmented across regions, sectors, and authorities,” forcing innovators to comply with disconnected regimes that define basic terms like “waste” and “reuse” differently. This patchwork not only drives up compliance costs but also stalls the integration of new solutions nationwide. An AI ClimateTech argues that the UK’s tendency to treat used materials purely as “waste” rather than as valuable resources leads to distorted incentives and underinvestment in innovation – a structural fragmentation that keeps circular ClimateTech solutions on the margins.

In the mobility sector, a micromobility startup highlighted how a lack of national standards has resulted in each local authority developing its own rules for shared e-bikes and e-scooters. In this startup’s experience operating across dozens of UK cities, this has led to duplicative and sometimes contradictory regulations on licensing, parking, fleet size and more. Innovators must constantly adjust to local variations, which “creates duplication, inconsistent user experiences, and higher costs, making it harder to scale the technology”. This micromobility startup welcomed the prospect of upcoming national guidance via the Devolution & Community Empowerment Bill to harmonise micromobility rules, as a consistent baseline would give councils clarity and “provide operators with the confidence to invest in fleets, infrastructure and staff” across the UK. Until such guidance is in place, however, the regulatory patchwork persists, each city bylaws a slightly different roadblock.

Several respondents pointed out that fragmentation isn't only geographic, it's also sectoral and procedural. A climate action startup, which works with businesses on voluntary climate action, described a confusing landscape of overlapping standards and frameworks that companies face in the absence of a single mandated approach. They listed out how an SME trying to do the right thing on climate may need to navigate everything from the Greenhouse Gas Protocol for carbon accounting, to SECR and CDP disclosure rules, to Science-Based Targets, ISO standards, the Green Claims Code, and more. These initiatives often don't align perfectly and impose a huge administrative burden.

A climate action startup, working in the carbon credits sector noted that because the government has left a vacuum of specific compliance for most businesses, a patchwork of quasi-compliance mechanisms has arisen and companies are genuinely unclear about what actions to take or which standards to follow. The net effect is that many do nothing, stalling demand for ClimateTech services. This startup's message was that a clearer government direction, for example, a unified net-zero framework for small businesses would cut through the noise and create a smoother path for climate innovations to be adopted. Another dimension of uncertainty is temporal fragmentation, shifting policies over time. Businesses emphasised that abrupt changes or delays in climate policy can be just as damaging as regional inconsistency.

A retrofit startup noted that the Government has sometimes set bold climate requirements only to postpone or dilute them, creating whiplash in the market. For instance, an impending regulation to raise the minimum Energy Performance Certificate (EPC) rating for rented homes was widely expected by 2025 – innovators and investors geared up for a wave of retrofitting – but the deadline was pushed back to 2030, causing many projects to collapse. According to this retrofit firm, the mooted EPC uplift being “consulted on for 2030” instead of enforced earlier “has killed the market in private rental retrofit”. Many landlords and property owners simply put plans on hold, expecting they can wait another five years.

Another retrofit startup echoed this problem in the context of new-build housing standards. They recounted that the Future Homes Standard (FHS), which will require new homes to be zero-carbon ready, was originally planned for 2025 and formed a cornerstone of this retrofit's startup business case – but any wavering or delay in FHS implementation directly shrinks their addressable market. As this startup put it, most volume housebuilders only build to minimum regulatory requirements; if those requirements don't increase on schedule, “the market for our technology is very limited” and a year's delay in FHS rollout translates into £3 billion in additional retrofit costs down the line. Thus, regulatory uncertainty over timing can freeze private sector innovation, whereas consistent, ratcheting standards would create a reliable demand pull for ClimateTech. Contributors also noted devolved and local disparities. While climate policy ambition is high at the national level, execution on the ground can depend on local capacity or politics.

One submission from a ClimateTech data-focused startup observed that “the industry is moving faster than policy causing a lag,” and that at the local level, well-intentioned national schemes can get bogged down. They cited disconnects such as local planning processes and legacy standards for example, TrustMark accreditation, PAS requirements, that can make it difficult for new tech to break through, even though devolved authorities might be open to innovation.

A micromobility startup similarly stressed that support for technology as a means of addressing climate change “remains patchy” across different levels of government: the Department for Transport and Active Travel England have been supportive, but many local authorities still treat climate initiatives in isolation, separate from planning or public health agendas. This results in short-term fixes or inaction that undermine longer-term climate goals. In summary, evidence across sectors – from digital recycling platforms to mobility and building energy – highlights that fragmented governance and unpredictable policy are a top barrier. Streamlining and unifying climate-related regulations and then sticking to them emerged as a clear priority to unlock innovation.

Regional Inconsistencies and Procurement Issues

The inquiry heard many accounts of how where you operate in the UK – and how public bodies procure solutions – can make or break a ClimateTech venture. Regional inconsistency in policy implementation and barriers in public procurement were frequently cited as key challenges, especially for companies dealing with local authorities or trying to sell into public-sector markets. Stakeholders noted that devolved administrations and even neighbouring councils sometimes take very different approaches to climate-related regulation.

A retrofit startup observed, for example, that Scotland and Wales have generally pushed for higher building energy standards sooner than England hinting at future divergence in new-build requirements. However, even proactive regions ultimately “are also waiting for the FHS standards to be launched and implemented” from Westminster – indicating that innovators face a patchwork of timelines and ambition levels.

A submission from a data focused ClimateTech startup articulated a broader concern: a “disconnect between national policy and local implementation” can mean that even when the central government empowers local innovation through funding or powers, the lack of coordination and differing local priorities can slow things down. One example given was the Biodiversity Net Gain mandate – DEFRA requires property developers to offset biodiversity loss, creating a new nature market, but other sectors have no similar requirement. This leads to partial uptake and a fragmented market for nature-based solutions. The principle extends to technology: a climate solution that cuts across transport, energy and digital might have to satisfy each sector’s rules separately, with no unified national policy to smooth its path. However, some of

the most vivid regional issues raised were around local authority capacity and procurement. ClimateTech companies interfacing with councils – for services like building retrofits, EV charging infrastructure, smart city tech, etc. – reported significant frustrations.

An overarching theme was that many local authorities and other public clients like housing associations lack the resources or incentives to procure innovative solutions, often defaulting to incumbent providers and familiar methods. A retrofit startup provided detailed evidence on this point. They noted that in the grant-funded retrofit programmes they participate in, “the biggest buyers are still local authorities and housing associations,” yet these clients often move slowly and stick with large incumbent contractors. Furthermore, citing that in the Social Housing Decarbonisation Fund’s Wave 2, only 27% of planned home installations were completed by the originally intended end-date – indicating serious bottlenecks in local delivery.

Furthermore, procurement delays and inertia have tangible impacts on SMEs: “Small businesses can’t cash flow during these lag periods, and get killed” waiting for councils to get contracts in place. The same retrofit startup, recounted how some local authorities failed to effectively use new procurement frameworks that were meant to bring in innovative SMEs. One council paused its housing retrofit tender indefinitely because a key staff member left, and another simply renewed an incumbent’s contract despite a new “Warm Homes” framework existing.

The overall picture painted is one of local systems that, despite good intentions, are not yet equipped to engage with new market entrants or manage climate projects at pace. From the perspective of innovators, these procurement hurdles are double trouble: not only do they lose contracts to incumbents, but the slow rollout of public projects means less real-world deployment to prove their solutions. A ClimateTech startup headquartered in London and pioneering green innovation and digital grid transformation pointed out that government’s stop-start funding and capacity gaps mean that even when money is allocated, for example, in waves of retrofit grants, it doesn’t translate to smooth delivery – which then dampens private investor confidence in the sector. It’s not just in retrofit. In the transport sector, startups noted that city procurement of new mobility services can be very cautious.

A micromobility startup shared that without clearer national guidance, some cities impose onerous terms or short trial contracts for shared e-scooters, making it risky for companies to invest in better hardware or local hiring. Each city effectively “reinvents the wheel” with its procurement and operating rules, leading to high overhead for operators who expand region by region.

In the emerging heat networks arena, where local authorities and developers collaborate on district heating, a submission highlighted a specific procurement/regulatory gap: the lack of standard templates or guidance

for Heat Supply Agreements (HSAs) between heat sources for example, industries or data centers with waste heat and network operators. Unlike power purchase agreements in electricity, HSAs have no agreed model in the UK, so every project must negotiate from scratch, slowing down deals. This is both a procurement and regulatory issue – one that some other countries address through national model contracts or facilitation.

Against this backdrop, several local authorities stand out for procurement that genuinely opens the door to young, innovative firms, rather than simply widening access for established local suppliers. The most direct mechanism is pre-commercial procurement, where a council funds a startup to develop and test an unproven solution before any full contract is on the table: Leeds City Council and the City of York have run a social-housing sensor programme on this basis, Waltham Forest a geospatial housing project, and Oxfordshire County Council a new-mobility network system, each de-risking exactly the leap from proven prototype to deployment that innovators identify above as so difficult. At a more systemic level, the London Office of Technology and Innovation (LOTI) has produced an Innovation in Procurement Toolkit with a focus on innovation and 'agile' procurement, including how boroughs can work more with startups, scaleups, SMEs and local suppliers, crucially encouraging boroughs to pool demand by collaborating on procurements with shared service needs making individual contracts large enough to be commercially viable for a startup while cutting duplication. These approaches show the procurement barriers described above are not inevitable: where councils combine early market engagement, aggregated demand and instruments designed to back unproven innovation, novel climate solutions can and do reach public services.

The evidence suggests a few root causes for these regional and procurement challenges:

- **Resource and skills gaps:** Local bodies may lack specialised procurement officers or project managers for ClimateTech, leading to delays and risk aversion. As one respondent put it, the government has devolved budgets and powers without capacity to match at the local level.
- **Incentive misalignment:** Incumbent contractors have established relationships and can navigate bureaucracy more easily, so they continue to win bids, whereas innovation with its inherent uncertainty is seen as a risk. Traditional procurement focuses on lowest cost and proven track record, which can sideline novel solutions, but this in turn locks in a finite number of contractors, and specific technologies.
- **Fragmented authority:** In areas like planning and transport, local authorities have substantial autonomy. Pioneering councils can forge ahead as seen in some boroughs requiring higher

standards or piloting new tech, but others lag, and there is limited mechanism to standardise or enforce best practices across regions.

Stakeholders proposed solutions like mandatory use of procurement frameworks that include SMEs, publishing best-practice templates, and boosting local capacity. The Cabinet Office and Crown Commercial Service were also mentioned as levers – for instance, if the central government requires certain green criteria in all contracts, it forces consistency and creates a market for ClimateTech nationally.

In conclusion, the inquiry finds that uneven regional implementation and slow and challenging public procurement are major impediments to scaling climate solutions. A climate startup's success can hinge on whether it happens to pilot in an innovative city or a slow-moving one. Tackling this will require both carrots and sticks: building up local capacity and disseminating model processes so every council isn't starting from zero, but also tightening rules so that public bodies must consider and procure low-carbon, innovative options, rather than falling back on business-as-usual.

Market Entry and Scaling Friction

Even after a ClimateTech innovation has been proven to work technically, companies often face immense friction in entering the market and scaling up deployment. The inquiry identified several factors behind this: markets that don't reward climate benefits, customers who are unwilling to be first movers, lack of financing for first-of-a-kind projects, and regulatory models that favor incumbents or status quo solutions. These issues mean that many UK ClimateTech startups struggle to commercialise their innovations at home – a number of respondents warned that without improvements, promising firms will either stagnate or look overseas to scale.

A common refrain was “demand dependency on regulation.” Because many climate solutions address externalities such as carbon emissions, air quality, etc., market demand for them is often weak until regulation creates a requirement or cost for the status quo. One startup neatly stated that ClimateTech demand is policy-driven: “few consumers and businesses are willing to pay for services without legal and regulatory requirements”. They gave the example that when the Government introduced Minimum Energy Efficiency Standards for rented properties, compliance shot up - the share of the worst-rated homes fell by 90% in a few years, showing that regulation works to create a market. But when the government hesitates – as with the delayed EPC upgrades – the market remains stuck in “grant-funded” mode or not at all. In other words, many ClimateTech innovations are currently nice-to-have in the eyes of customers, unless and until rules change to make them must-have.

This reality places startups in a precarious position: they must survive long enough for the regulatory winds to shift in their favor, or try to drive that shift themselves by educating the market. A retrofit startup candidly shared how the delay in Future Homes Standard has forced them to seek alternative markets or interim revenue streams, because the mass adoption of their net-zero home technology won't occur until builders are compelled to exceed current minimums. Similarly, a submitter in the home retrofit sector described a "stop-start process" of scaling – periods of growth when a government incentive is active, followed by lull or collapse when policies change or funding runs out. This feast-or-famine cycle makes it extremely hard to plan a business, retain talent, or attract private capital. Another hindrance to market entry is risk-aversion among incumbent industries and consumers. Even when a ClimateTech product could save money or deliver benefits, if it's novel, buyers often hesitate. For instance, one innovator noted that housebuilders "continue doing what they have always done" installing gas boilers, meeting only the basic regulations and are not adopting available technologies that enable net-zero homes.

The builders cite cost or familiarity, and without a mandate or clear economic incentive, they won't change – leaving the climate-focused suppliers locked out of the mainstream market. A retrofit startup emphasised that as a result, they have to focus on niche projects or overseas opportunities while awaiting stronger UK rules. Several startups flagged specific regulatory omissions that, if addressed, would immediately improve market conditions. The microplastic filtration innovators pointed out that there is currently no UK requirement for washing machines domestic or commercial to have filters that capture microfibres, even though such technology exists and could drastically cut pollution. Because there's no regulation or standard, manufacturers and laundries have little incentive to add filters – which means the market for filter devices is minimal. The innovators warned of a "wait-and-see environment where manufacturers delay integration, citing uncertainty and competitive disadvantage". If the government simply mandated filters as France has done from 2025, it would create a sizable market overnight and scale up deployment, aligning industry action with environmental necessity. This example illustrates how the absence of standards can be as much a barrier as the presence of onerous ones – sometimes startups need regulation to create a level playing field for their solutions.

Scaling up often requires significant capital, and respondents described a financing gap at the point of market entry. Traditional investors can be wary if the revenue depends on future policy or untested customers. One hardware-focused company in solar tech explained that after prototyping successfully, they faced a "fundamental capital structure challenge" in scaling deployments – project finance wasn't available at their small scale, and equity alone couldn't cover the cost of hardware for growth. This is a common dilemma: banks won't fund first-of-a-kind projects due to perceived risk, but without project finance, the startup can't demonstrate the bankability of their model. We heard that the government should move beyond passive observation of this gap and introduce government-backed guarantees and co-investment mechanisms specifically designed to de-risk first deployment projects, the critical and currently unfunded

moment between proven prototype and commercial scale. The National Wealth Fund (NWF), the Guarantee schemes, and the British Business Bank already have the architecture to deliver this. What is missing is the political decision to direct those tools at early-stage climate tech deployments before more startups are forced to scale up abroad.

There are innovative financing mechanisms which could work to improve the accessibility of debt-style financing for technology startups with heavy assets and large capex. These mechanisms require the state to provide first loss capital guarantees, to give private investors more confidence to invest in riskier areas. Respondents suggested that the government should explore how the NWF could be a world leader in these instruments, leveraging the deep capital market infrastructure, leading green finance expertise, and the push for institutional investors to invest more into these asset classes.

The inquiry also heard that market entry is especially hard for cross-sector innovations that don't fit neatly into one regulatory category. A submission from an AI-powered ClimateTech specialising in industrial decarbonisation pointed out that UK regulatory frameworks tend to favour tangible, single-sector projects. They noted that current incentives like Ofgem's network funding or industrial grants, "value traditional infrastructure investment over digital or software-led improvements," which means things like AI optimisation systems – even if they could save significant carbon – are often not recognised or rewarded. This bias makes it difficult for such solutions to enter the market, as customers don't get regulatory credit for adopting them. An AI ClimateTech startup argued that revising these frameworks to value outcomes regardless of whether they come from concrete and steel or from code and data, would open the door for many digital ClimateTech offerings. In other words, innovation in business models or software currently faces a hurdle because the market rules were written for hardware of the past.

Finally, multiple respondents raised the issue of international pull factors. If the UK market is sluggish, innovators will look abroad. One energy tech startup bluntly stated that Brexit and the US Inflation Reduction Act have made the UK less attractive – some overseas funds now require companies to be EU-based to invest, and generous US incentives are luring climate startups to relocate or focus there. We even heard that British startups are sometimes planning their scale-up in North America or Europe where they perceive an easier path to market, potentially depriving the UK of jobs and intellectual property.

This highlights that improving market entry conditions in the UK isn't just about helping startups – it's about keeping Britain competitive in the global race for ClimateTech leadership. In summary, entering and scaling in the UK climate sector remains too hard. Until sufficient demand signals, financing support, and accommodating regulations are in place, many innovators will struggle to move beyond the pilot stage.

The evidence suggests that clear policy commitments, smarter regulation that rewards innovation, and targeted support for the scale-up phase can greatly reduce these frictions.

Institutional and Cross-Departmental Obstacles

The inquiry's evidence shed light on a subtler but significant barrier: the way that government departments, agencies, and regulators themselves are organised can either support or stifle ClimateTech innovation. Many contributors felt that the UK's institutional setup is still too siloed and misaligned to deal with cross-cutting climate technologies, even as all parts of government voice support for net zero in principle.

On the positive side, a few departments and regulators were praised for their openness to innovation. A micromobility startup specialising in EV commended the Department for Transport (DfT) for being “very constructive” in its approach – citing the national e-scooter trials and DfT's work on statutory guidance for local transport decarbonisation as examples of a department actively enabling innovation. This startup also highlighted Active Travel England as playing an important role in promoting new mobility solutions and helping local authorities deliver changes on the ground.

Similarly, a carbon ratings startup noted that the Department for Energy Security & Net Zero (DESNZ) has shown willingness to listen to industry through forums like the [Carbon Markets Innovation Forum](#) and has been receptive to insights from innovators. This indicates that there are pockets of good practice – where officials engage with startups, participate in roundtables, or facilitate trials – which should be celebrated and replicated across Whitehall.

However, these examples were somewhat isolated. The broader sentiment was that support is inconsistent and often personality-dependent, and that institutional inertia can hinder progress. A mobility startup, despite lauding DfT, observed that “support across different levels of government remains patchy” – especially at the local level, where silos between departments lead to short-term decisions that undermine long-term climate goals. A local council's transport team might not coordinate with its planning or public health team, for instance, resulting in disjointed policies.

One core issue identified is misaligned objectives between departments and regulators. A detailed submission pointed out a glaring example: the Government's Clean Power 2030 unit within DESNZ is pushing a strategy of system-wide innovation – emphasising digitalisation, flexibility, and smarter grids as essential for rapid decarbonisation. Yet, at the same time, Ofgem has been proceeding with a regulatory approach that is seen as conservative and infrastructure-heavy.

The submission noted “a growing misalignment between central government policy ambition and Ofgem’s regulatory conservatism,” where one part of the state advocates for “flexibility first” and the other sticks to traditional metrics and risk aversion. For example, Ofgem’s draft plans for the next network price control (RIIO-ED3) were criticised for reverting to funding mostly conventional network investments and not sufficiently incentivising digital or demand-side solutions. This conflict sends mixed signals to innovators and investors: will the UK reward smart grid tech or not, an AI ClimateTech startup focusing on industrial decarbonisation argued that until regulators’ evaluation criteria catch up – explicitly valuing things like carbon reductions and digital performance – innovative solutions will be “crowded out” by business-as-usual investments. Several respondents touched on the challenge of cross-departmental coordination for cross-cutting technologies.

An AI ClimateTech startup shared a telling experience: their work on digital product passports, linking waste reduction with digital tokens has garnered interest from a team within DEFRA, but that team “lacks capacity for cross-sectoral coordination,” meaning they struggle to loop in other departments that would need to be involved. Innovators often find themselves having to educate multiple departments separately because there isn’t an established mechanism to address a technology that spans, say, environmental regulation and data governance. One suggestion from evidence was to create formal liaison groups or task forces on emerging areas for instance, a joint unit on climate data & digital that brings together environment, industry, and digital regulators. Without such forums, even well-meaning officials operate within their silos and innovative ideas fall through the cracks. The inquiry also heard concerns about institutional risk aversion and culture. An AI ClimateTech startup commented that environmental regulators “remain siloed, with no mandate to explore system-level innovation” – essentially, regulators focus narrowly on their statutory duties and avoid stepping outside the familiar, even if a new approach could achieve the same goals more efficiently.

Another submission noted that while all government entities “in principle agree with the need to address climate change,” they often “let their priorities be diverted by companies lobbying to protect their own interests”. A retrofit startup gave the Future Homes Standard delay as an example: housebuilders lobbied to postpone stricter standards, citing concerns about costs or housing supply, and it appears their voice carried weight in Whitehall, to the detriment of climate innovators and longer-term savings. This raises a governance question: are there sufficient champions for long-term climate innovation inside government, counterbalancing incumbent industry pressure. The evidence suggests this is an area needing improvement. On the regulatory side, a few respondents suggested that regulators need to modernise their internal capabilities. For instance, having dedicated innovation teams or “sandboxes” groups like the FCA has, as well as staff skilled in emerging tech areas such as data science, AI ethics, climate science could help regulators better evaluate and support ClimateTech proposals. One idea was that regulators should report on how they are adapting to enable climate innovation, making it a part of their accountability.

In summary, institutional obstacles often manifest as a lack of alignment and agility: different arms of government not moving in concert toward climate innovation goals, and regulatory bodies being slow or cautious in adapting to new technologies. Overcoming these obstacles will likely require structural solutions like taskforces or joint units for cross-cutting issues and cultural ones leadership prioritising innovation and building capability within agencies. Stakeholders are clearly eager to see the government act as one team on net zero, rather than separate fiefdoms.

Policy Recommendations

Drawing on the wealth of evidence and ideas submitted, the APPG on ClimateTech puts forward the following policy recommendations to break the regulatory gridlock and accelerate climate innovation. These recommendations are targeted at the UK Government, Parliament, and regulatory agencies, and are informed directly by stakeholder input (attributed where specific suggestions were made):

1. **Strengthen ClimateTech Export and Finance Pathways**

The UK has an opportunity to become a global hub for ClimateTech, but must support firms in accessing finance and overseas markets. The Government should enhance coordination between UK Export Finance (UKEF), the British Business Bank (BBB), and trade promotion bodies to create clear export pathways for green technologies. This could include loan guarantees, export credit lines, and marketing support for international growth. Stronger export support will help companies scale and compete globally.

2. **Establish a ClimateTech "Frontdoor" Within the Regulatory Innovation Office**

The UK should create a dedicated access point for ClimateTech firms within the Regulatory Innovation Office, replicating successful models already in place for DefenceTech and Robotics. This "Frontdoor" would serve as a one-stop-shop for innovators seeking regulatory advice, sandbox opportunities, and cross-government engagement. It would provide clarity on who to contact, how to test new approaches, and where to find support particularly for startups without established government relationships. By offering coordinated guidance, this measure would lower barriers to innovation and reduce time spent navigating siloed institutions.

3. **Publish Standardised Contracts for ClimateTech Procurement**

Innovative businesses regularly cite procurement as a core obstacle to deployment. Local authorities often lack the tools or confidence to procure emerging technologies, leading to duplicated legal processes and risk-averse contracting. The government should issue model contracts and

template agreements for common ClimateTech use cases such as clean transport innovation or district heating networks drawing on industry best practice. Clear guidance and templated documents would reduce transaction costs, shorten procurement timelines, and help level the playing field for SMEs.

4. Expand Use of Regulatory Sandboxes and Improve Access

Evidence repeatedly highlighted the transformative potential of regulatory sandboxes, yet access remains limited and inconsistent. The government should expand the use of sandboxes across departments and regulators, particularly where innovation is impeded by rigid frameworks. To help innovators identify opportunities, a centralised digital hub should list all available sandboxes and provide a simple interface such as an AI-powered chatbot for navigating eligibility and application. This would ensure transparency, encourage uptake, and make support more accessible to non-traditional market entrants.

5. Introduce Innovation Fellowships in Regulators

To ensure that regulatory bodies keep pace with technological change, the Government should embed dedicated innovation fellows within key agencies. Building on the No.10 Innovation Fellowship model, these roles would bring external expertise in fields like AI, energy systems, or green construction into regulatory decision-making. Fellows could help shape guidance, design trials, and improve institutional understanding of new technologies. Several respondents noted that the lack of in-house capability hampers regulatory flexibility; this programme would address that gap directly.

6. Leverage State Levers to Unlock Climate Data

Access to high-quality data remains a foundational enabler for many ClimateTech solutions from optimisation algorithms to supply chain traceability. The state holds vast datasets that could accelerate innovation, yet current access frameworks are piecemeal and slow. The government should use mechanisms like the Smart Data initiative and the National Data Laboratory to unlock climate-relevant datasets for safe reuse. This might include real-time emissions data, grid information, building stock profiles, and environmental monitoring. Unlocking data would not only support new technologies, but also improve transparency and accountability across the net zero transition.

7. Promote Long-Term Policy Stability

A recurring message from evidence submissions was the need for consistent, long-term policy frameworks. Sudden reversals, delayed standards, or unclear signals can deter investment and stall deployment. The government should strive for cross-party alignment on core net zero objectives and

resist the temptation to unwind key policies without consultation. Where policy shifts are needed, transition plans should be published and include compensatory mechanisms. This approach will help maintain the UK's credibility as a stable and attractive market for ClimateTech innovation.

Each of these recommendations supports the others: a coherent framework makes sandbox trials easier to scale; empowering regulators and boosting local capacity ensures that national policies are implemented on the ground; policy certainty and investment incentives work together to unleash capital. Implemented together, they would transform the UK's regulatory environment from a source of gridlock to a source of competitive advantage. Importantly, these changes also protect the public interest – reliable standards ensure safety and trust, sandboxes maintain oversight, procurement rules deliver value for money in the long term through sustainability, and market confidence brings jobs and growth. The APPG believes that smart regulation and innovation go hand in hand: by acting on these recommendations, the UK can accelerate climate action in a way that is socially equitable and unleashes economic growth.

Conclusion

This inquiry has made clear that the UK's innovators are ready and eager to drive forward the net-zero transition – but they cannot do it alone. Too often, their path is blocked by outdated rules, fragmented authority, or a lack of official support. Climate innovation is happening at the edges of our systems, when it needs to move to the centre. The findings show a pattern: when regulators and policies embrace innovation, the benefits are quickly realised – as seen when clear efficiency standards cut energy waste dramatically, or when a regulator's flexibility allowed new water solutions to flourish. Conversely, when the system clings to the status quo, innovation slows or stalls – evidenced by pilot projects that never progress, or startups leaving the UK market for friendlier shores. Encouragingly, none of the barriers identified are insurmountable. They are policy choices, institutional habits, or legacy frameworks – all of which can change.

The recommendations presented are ambitious but achievable steps towards a regulatory environment that is as agile and forward-looking as the ClimateTech sector itself. By harmonising regulations, we reduce friction. By opening sandboxes, we de-risk experimentation. By reforming procurement, we bring new solutions into public services. By aligning institutions, we ensure everyone grows in the same direction. And by providing policy certainty, we unlock the investment to scale what works. ClimateTech APPG calls on the Government, Parliament and regulators to take these proposals to heart. The UK has much to gain: a thriving ClimateTech industry will not only help meet our emissions targets but can become a cornerstone of the future economy, creating jobs across the country, from tech hubs to industrial regions. It will also improve quality of life – cleaner air, warmer homes, lower energy bills, and a more sustainable environment for future generations. Time is of the essence. As one submission warned, a “wait-and-see” approach breeds only stagnation.

The window for UK leadership in many ClimateTech fields is open now, but other countries are racing through it. To use a transport analogy, the UK must switch off the regulatory “red lights” and turn them green – signalling full speed ahead for climate innovation. The APPG will continue to champion these issues and monitor progress. We urge ministers and officials to work with the innovators – like those who generously contributed evidence – in implementing solutions. By doing so, Britain can turn climate policy from a blocker into a springboard, unleashing innovation that delivers both economic vitality and environmental security.

The path to net zero will demand ingenuity at every turn; it's time to unlock the gridlocks and let ingenuity lead the way. The information and quotations in this report are drawn from evidence submissions to the ClimateTech APPG inquiry “Gridlocked: Unblocking the Path for Climate Innovation,” including contributions that came from a broad range of stakeholders, including startups and scale-ups developing AI-driven

circular economy and sustainability data platforms, climate and carbon management tools, smart home energy systems, and housing retrofit technologies, alongside major infrastructure operators and regulators. Each provides valuable insight into the challenges and opportunities at this critical nexus of innovation and regulation.



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