

Ofgem: AI Technical Sandbox

March 2026

ABOUT STARTUP COALITION

Startup Coalition is the policy voice of UK tech startups and scaleups in Westminster. Since 2010, we have worked to engage on behalf of tech startups in public policy debates in the UK across a range of critical priority issues including access to finance, immigration and skills, and technology regulation.

We fight for a policy environment that enables early-stage British tech companies to grow, scale and compete globally. We have over 4000 startups in our network and have been instrumental in building proactive coalitions of businesses and investors on issues that are integral to the health of the UK's startup ecosystem.

The Startup Coalition works directly with the Government across a range of issues. We represent the startup community on the Smart Data Council.

GENERAL REMARKS

Startup Coalition welcomes the opportunity to respond to the consultation on the AI Technical Sandbox. We recognise and support the Government's intention to create a controlled environment where AI applications can be tested against real operational challenges. However, for the startup community, the current regulatory framework in the energy sector often feels like a legacy fortress – one that celebrates innovation in theory but restricts it in practice through high barriers to entry and a "whack-a-mole" approach to digital reform.

At its core, this consultation is not simply about testing software. It is about how the UK intends to build the digital nervous system of its future energy infrastructure. In an economy increasingly defined by the transition to Net Zero, AI is no longer a peripheral efficiency tool; it is the foundational technology required to manage a flexible, decarbonised grid. Yet, for the UK's most promising scaleups, the cost of regulatory friction and the inability to access "real-world" testing environments are now binding constraints on growth. The difficulty of validating new technologies in live settings means that even technically superior solutions face a "Valley of Death," where they fail to move beyond proof-of-concept, not due to a lack of merit, but due to a lack of a bridge to the grid.

The UK currently faces a stark innovation challenge. While we possess a world-leading ecosystem of AI and climate-tech startups, the energy sector remains structurally tilted toward established, asset-heavy incumbents. This creates a fundamental policy contradiction: the Government looks to startups to deliver growth and decarbonisation, yet the regulatory "front door" is often locked behind a gatekeeper dynamic where innovators must seek permission from the very incumbents they seek to disrupt. If the objective of the AI Technical Sandbox is truly to unlock the potential of the UK's innovation ecosystem, then it must move beyond a "corporate-led" model of participation.

A well-designed sandbox must be more than a regulatory experiment; it must be a credible signal to founders and investors that the UK is open for digital business. This requires a "startup-by-default" mindset, one that provides direct access to high-fidelity system data, removes the need for corporate "sponsors" to lead pilots, and ensures that a successful trial isn't just a technical win, but a fast-track to market-wide deployment. Without this, the sandbox risks becoming an experimentation playground for the status quo rather than a launchpad for the future of the UK energy system.

CONSULTATION RESPONSE

Eligibility and participation

Q1. Do you agree with the proposed eligibility criteria for lead Participants (licensees, market participants, and operators of essential services) and the encouragement of partnerships with technology providers, academia, and other innovators? Please explain your reasoning.

Startup Coalition disagrees with the current proposal to restrict "Lead Participant" status exclusively to licensees and established market participants. This restriction creates a significant structural barrier by establishing a gatekeeper dynamic where innovative AI startups are forced to secure a "corporate sponsor" before they can even access the testing environment. In many tech-adjacent sectors, the most transformative solutions come from "outsider" firms that challenge the status quo; requiring a startup to partner with a potentially risk-averse incumbent introduces a conflict of interest that may filter out truly disruptive innovations.

Furthermore, the timeline for a startup to negotiate a partnership agreement with a large utility often exceeds 6 to 9 months, which is incompatible with the 18-month funding cycles typical of venture-backed startup and scaleup. To foster a truly competitive and innovative market, Ofgem should amend the criteria to allow technology providers to act as Lead Participants, with the regulator facilitating the necessary system access.

Use case selection

Q2. Are the proposed use case selection criteria (including commercial neutrality, innovation, sector impact, regulatory uncertainty, testability, governance, and data access) appropriate and sufficient to ensure a fair and transparent process? Are there other criteria, safeguards, or considerations we should include?

While the proposed criteria are broadly appropriate, we believe they lack sufficient emphasis on "Software-as-Infrastructure" and commercial velocity. Current regulatory frameworks in the energy sector tend to reward capital-intensive hardware projects over more efficient, software-led optimisation tools; therefore, selection criteria must explicitly value digital solutions that can achieve grid-scale impacts without the need for traditional "concrete and steel" investments. We also have concerns that a strict interpretation of "Commercial Neutrality" could inadvertently penalise startups attempting to prove the commercial viability of a new business model to potential investors.

By adding a "Speed to Market" criterion, Ofgem can ensure the sandbox prioritises solutions that are ready to be deployed across the wider grid within a year of the pilot's conclusion.

Alignment with other initiatives

Q3. Is the proposed approach for the AI Technical Sandbox clearly distinct and complementary to other initiatives such as Ofgem's AI Reg Lab, Energy Regulation Sandbox, Future Regulation Sandbox, UKRI-funded and SIF/NIA initiatives, NESO, FCA regulatory sandbox experience, and DSIT AI Growth Lab? Are there other relevant initiatives or examples of best practice that Ofgem should consider, and if so, which ones?

The consultation outlines useful links between the AI Technical Sandbox and other initiatives such as the AI Regulatory Laboratory, the Energy Regulation Sandbox, and the Future Regulation Sandbox. However, the effectiveness of this ecosystem will depend on clear progression and intersection pathways between these mechanisms. From a startup perspective, the key question is what happens after a sandbox trial succeeds. If a technology demonstrates value during the sandbox phase but requires regulatory flexibility, operational deployment, or rule changes to scale, there should be a clear route to the next stage.

We also recommend that Ofgem clearly define how successful projects can progress from the AI Technical Sandbox into live trials, regulatory experimentation, or commercial deployment. Without this progression pathway, there is a risk that innovative projects remain stuck in pilot phases rather than contributing to meaningful system change. This would also maximise the market-building capacity of the sandbox and demonstrate the regulator's commitment to economic growth.

Engagement and governance

Q4. Does the proposed governance structure (steering group, working groups, open forums) provide sufficient oversight, transparency, and opportunities for stakeholder engagement? Are there other mechanisms or safeguards that should be included to ensure effective governance and knowledge sharing?

The proposed governance structure is solid in theory, but requires mandated representation for the startup and scaleup community to prevent "incumbent capture." Traditional energy sector governance is often optimised for large corporations with dedicated "Regulatory Affairs" departments, which can inadvertently exclude the voices of lean, high-growth companies that do not have the headcount to attend multiple long-form consultative sessions. To ensure that the sandbox remains agile and responsive to the rapid iteration cycles of AI development, Ofgem must reserve seats on the Steering Group specifically for active technology founders or senior engineers from the startup ecosystem.

Additionally, we advocate for "Asynchronous Governance" models, utilising digital platforms for ad-hoc updates and feedback rather than relying solely on working groups and other formal feedback fora. This approach ensures that transparency is inclusive and that the sandbox outcomes reflect the priorities of the innovators building the future energy system, rather than just the incumbents maintaining the current one. Startup founders do not have

infinite time available to spend in regulatory working groups.

Timelines and next steps

Q5. Are the proposed next steps for developing and launching the pilot clear, and is there anything further we should consider as we refine the timeline?

While the proposed steps are clear, the timeline must prioritise "administrative velocity" to align with the extreme financial and operational pressures faced by early-stage companies. Long "dead periods" between the application phase, selection, and the commencement of testing represent an existential risk for startups that operate on limited runways. We recommend that Ofgem implement a "Rolling Admission" or "Fast-Track" model for companies that have already secured private venture capital, as this funding serves as a robust external validation of the technology's potential and investor readiness.

To further reduce friction, the regulator should provide pre-approved, standardised legal templates and participation agreements. Negotiating bespoke liability and intellectual property terms for a temporary trial is a significant drain on a startup's limited legal and financial resources; providing "off-the-shelf" terms would allow companies to enter the sandbox in weeks rather than months, maximising the 12-month pilot window.

Ethics and responsible AI

Q6. Does the consultation and proposed pilot sufficiently address ethical considerations (fairness, transparency, responsible use, consumer trust) in line with Ofgem's AI guidance? Are there further steps we should take to embed ethics and safety in the sandbox?

Startup Coalition believes that while the consultation rightly highlights crucial ethical considerations, the approach to implementing them must reflect the pace of the technology it seeks to regulate. We must recognise that speed and innovation are critical to delivering positive outcomes for the energy sector; unnecessarily delaying the deployment of AI that could optimise the grid, lower bills, and accelerate Net Zero carries its own risks.

If the sandbox defaults to traditional, "document-heavy" compliance, it risks stifling the very innovation it seeks to foster. Onerous requirements for lengthy narrative ethics assessments disproportionately favour large incumbents with extensive compliance departments and act as an administrative "founder tax" on lean startup teams. To ensure the sandbox is accessible and effective, we must shift the paradigm from subjective, narrative-based compliance to rigorous, technical verification.

To achieve this, "ethical concerns" should be approached as technical parameters that require precise, quantifiable metrics rather than subjective, qualitative reviews. Terms like "fairness" and "transparency" should be translated into measurable thresholds such as statistical parity across demographic datasets, bounded error rates, or specific algorithmic explainability scores. Startups should be empowered to prove the safety and fairness of their models with data, rather than documentation. Instead of asking a founder to write an extensive report on responsible use, Ofgem should embed "Responsible AI" directly into the sandbox's technical infrastructure by providing automated testing suites. By running models

against standardised, regulator-held datasets, participants can detect bias or safety issues in an objective, data-driven manner.

Furthermore, Ofgem should embrace modern, tech-native methods for startups to demonstrate their ethical compliance and safety. Instead of relying solely on traditional pre- and post-test narrative reviews, the sandbox could adopt the following mechanisms:

- "Compliance-as-Code" Test Suites: Instead of asking founders to write extensive reports on responsible use, Ofgem should provide open-source ethical test scripts. Startups can plug these directly into their Continuous Integration/Continuous Deployment (CI/CD) pipelines to automatically check models for bias and safety thresholds with every code update.
- Standardised "Model Cards": Ofgem should accept machine-readable Model Cards, concise, auto-generated summaries akin to "nutritional labels" that explicitly list a model's training data bounds, performance limitations, and tested bias metrics in place of bespoke, narrative ethics impact assessments.
- "Golden Dataset" Benchmarking: Ofgem should provide a standardised, synthetic dataset containing known edge-cases and bias traps. Startups can objectively demonstrate fairness simply by running their algorithm against this dataset and submitting the output logs.
- API Telemetry & Read-Only Dashboards: Rather than static, point-in-time reviews, startups could provide Ofgem with read-only access to a live metrics dashboard. This gives the regulator real-time, quantifiable proof of the model's safety metrics and "data drift" as it operates within the sandbox.

Stakeholder support

Q7. Do you have suggestions for how Ofgem can best support stakeholders throughout the pilot and beyond?

For startups developing new technologies, the most important question when considering participation in a regulatory sandbox is what happens after the experiment ends. While sandboxes are valuable for generating technical and regulatory learning, their impact is limited if successful trials do not translate into real-world deployment.

Ofgem can therefore best support startups by ensuring that the AI Technical Sandbox provides clear and credible pathways from experimentation to adoption.

Where sandbox trials demonstrate clear benefits for consumers or the energy system, Ofgem should consider how the outcomes can inform regulatory guidance, market frameworks, and operational practices across the sector. Startups often struggle not because their technologies lack technical viability, but because there is no clear mechanism through which regulators and market actors translate successful experimentation into regulatory clarity or market uptake.

Providing visibility on how successful projects can progress beyond the sandbox will significantly improve confidence among innovators and investors. This could include outlining how sandbox learnings may inform future regulatory guidance, identifying routes into other regulatory mechanisms such as live trials where appropriate, or highlighting

opportunities for further collaboration with system operators, networks, and market participants.

Greater transparency around these pathways would help ensure that sandbox participation is seen not only as a regulatory experiment, but as a meaningful step toward deployment within the energy system.

By focusing on clear routes from testing to adoption, Ofgem can ensure that the AI Technical Sandbox becomes not only a valuable regulatory learning tool, but also a practical mechanism for enabling startups to contribute to the future of the UK energy system.

General feedback

Q8. Do you have any other comments, suggestions, or concerns regarding the proposed pilot, the consultation process, or the expected outcomes? Please provide evidence, examples, or reasoning to support your responses wherever possible.

Startup Coalition strongly supports the creation of the AI Technical Sandbox and believes it has the potential to play an important role in enabling innovation in the UK energy system. However, we must emphasise that the sandbox's success should not be measured solely by the total number of trials conducted or reports produced. Instead, the initiative should be evaluated based on whether it tangibly improves the ability of startups to test and deploy innovative technologies within the live energy system, and the degree to which it increases the economic growth opportunity of energy innovation in the UK. Many startups can demonstrate technical value in isolation but struggle to access the operational environments, regulated counterparties, and procurement opportunities needed to scale their solutions into viable businesses.

If designed effectively, this sandbox can help close this critical gap by providing structured opportunities for testing and deep regulatory engagement that would otherwise be inaccessible to small firms. Ensuring that the sandbox remains truly accessible to startups and early-stage innovators will therefore be essential to its ultimate impact. By removing the traditional barriers of entry and providing a clear "path to reform" for successful pilots, Ofgem can help unlock the full potential of the UK's innovation ecosystem to support a more efficient, resilient, and decarbonised energy system.