UK Research and Innovation

Department for Energy Security & Net Zero

UKRI policy fellowships 2027

Fellowship position

Fellowship title:

DESNZ building performance measurement fellowship

Fellowship type:

Core policy fellowship

Host organisation:

Department for Energy Security and Net Zero

Host team:

Energy Research Team, Science and Innovation for Climate and Energy (SICE) directorate

Academic discipline/s:

Building physics, building services engineering, data analysis, post-construction testing and post-occupancy evaluation

Summary:

An opportunity to contribute valuable knowledge and experience in the field of building performance measurement; an area of significant cross-government interest supporting the delivery of net zero, comfort, and indoor air quality goals, and realisation of the aims of the Warm Homes Plan and Future Homes Standard (FHS).

Policy topic:

Cuts across several of DESNZ's departmental priorities, including Launching the Warm Homes Plan (WHP) to cut fuel poverty and getting a fairer deal for consumers and lowering bills, as well as the Industrial Strategy's Clean Energy Industries sector.

Research career stage:

Open to early and mid-career researchers

Fellowship structure

The fellowship is scheduled to begin on 1 October 2027 subject to security clearance requirements. The fellowship will have three phases:

- inception: duration is 3 months at 0.4 FTE
- main placement: duration is 12 months at 0.6-1 FTE
- knowledge exchange: duration is 3 months at 0.4 FTE

Work arrangements

Location requirements:

The role can be based in any DESNZ office; the Energy Research Team currently has members in London, Bristol, and Edinburgh, while the department overall has a significant presence in Aberdeen, Birmingham, Cardiff, Darlington, and Salford. There will be a requirement to travel occasionally to meet other team members, counterparts in other departments, and for events.

Hybrid working:

While DESNZ has a two-days-per-week minimum office working requirement, we would be content for the Policy Fellow to do a minimum one day per week in their chosen office (at any location listed above) during the main placement phase. A DESNZ laptop will be provided, enabling work from home or other sites, and providing access to host systems. In addition to office attendance, it would be useful to budget for travel to London (if not already based there) around four times in the placement year and once in the inception phase. Eligible Travel and Subsistence costs are supported in the main UKRI grant. Please see full call text and guidance for more details.

Security clearance and nationality eligibility criteria:

Basic Personnel Security Standard (BPSS) is required, which usually takes around six weeks. We expect the successful applicant to start the security clearance application process, with support from the host team, as soon as their fellowship has been confirmed by UKRI. The Inception phase can begin before the security clearance process is completed, but clearance will be required before the main placement phase. The Civil Service also has nationality requirements that candidates will need to meet in to take up the post. See the civil service recruitment nationality rules for further information. Candidates should check these requirements before applying to ensure they meet the eligibility criteria.

Fellowship position description

Overview:

Building performance measurement (BPM) assesses how buildings perform in practice; including energy use, thermal efficiency, ventilation, and the performance of low-carbon systems for heating, electricity generation, and storage. Improving our understanding of building performance and the tools used to evaluate it is important to the delivery of the Warm Homes Plan, Future Homes Standard, and wider net zero objectives.

DESNZ is seeking a Policy Fellow with expertise in BPM to better understand how measurement approaches can support policy development, consumer outcomes, and industry practice. The fellowship will focus on producing evidence relating to the ‘performance gap’ between design and measured building performance, using in-use measurement to support quality assurance, and how different BPM approaches can be used across building types and applications.

Research and analysis opportunities:

The fellow will co-design a programme of work with DESNZ during the inception phase. The precise focus will depend on departmental priorities and the fellow's expertise and interests, but could include:

- evaluating the strengths, limitations and appropriate applications of different BPM methods and tools; such as Smart Meter Enabled Thermal Efficiency Ratings (SMETERs), co-heating tests, low-pressure pulse tests, and rapid estimation of heat transfer coefficients
- assessing evidence on the measurement of building fabric performance, ventilation, and low-carbon heating and cooling systems
- exploring how BPM can support retrofit design, heat pump sizing, quality assurance, consumer protection, and continuous improvement in retrofit and newbuild programmes
- identifying priorities for future research, data collection, and evidence generation

The fellow will have scope to undertake original research and analysis, drawing on existing evidence, government-funded research programmes, and relevant datasets.

Data, collaboration and stakeholder engagement:

The fellow will have opportunities to engage with a range of data sources, research programmes, and stakeholders. Datasets may include the Homes for Net Zero (HfNZ), Energy Follow-up Survey (EFUS), and Smart Meter Energy Data Repository (SEDR) programmes; while the Fellowship will likely include work connected to the Smart Meter Enabled Thermal Efficiency Ratings (SMETER) programme and other DESNZ-funded policy and research activities. As well as DESNZ, engagement with other departments and bodies such as the Ministry of Housing, Communities and Local Government (MHCLG) and Building Safety Regulator (BSR) is possible. Through these interactions, the fellow will help strengthen knowledge exchange between government and the building performance community.

Outputs and impact:

We expect the fellowship to generate practical outputs to support policymaking and wider sector learning, including:

- research reports, evidence reviews, and analytical papers, some of which will be published externally
- recommendations for future research
- briefing materials, co-design, and review of draft documents for policy teams and senior decision makers
- workshops, seminars and knowledge exchange with stakeholders

The fellowship will improve our understanding of how BPM can support policy objectives such as consumer support and remediation, improve outcomes for buildings and their occupants such as better targeting and design of energy retrofit, and strengthen confidence in building performance data. Beyond addressing specific evidence gaps, the work will help build capability across government; strengthen links between policymakers, researchers, and industry; and support the adoption of robust measurement approaches across the buildings sector.

Situation in DESNZ:

The fellow will be embedded in the Energy Research Team in the Science and Innovation for Climate and Energy (SICE) Directorate. They will participate in the day-to-day work of the team and engage directly with Policy teams, Analysts, other technical specialists, and senior decision makers. The role offers a unique opportunity for the fellow to exhibit and further develop their expertise at the interface between research and policymaking, while contributing to nationally significant challenges relating to buildings, energy efficiency, and net zero.

Person specification

Applications will be assessed by a UKRI panel against the following essential opportunity-specific requirements, in addition to the generic eligibility and call criteria:

Essential criteria:

- subject matter expertise in building performance measurement; including building physics, building services engineering, post-occupancy evaluation, or other related fields
- strong analytical skills, including experience of analysing building performance, energy, or engineering datasets.
- strong communication skills including the ability to synthesise evidence from multiple sources and explain complex technical findings for a range of audiences, and applying evidence to real-world policy, regulatory, or industry contexts

Applicants shortlisted from the panel assessment will be invited to a host led interview. At this stage the host will also take into account the following desirable fellowship-specific requirements.

Desirable criteria:

There are no additional desirable criteria for this fellowship.

Processing personal data

If applicants are shortlisted by the UKRI assessment panel UKRI will need to share the application and any personal information that it contains with the host for the host led interview selection process.

Your personal data will be handled in line with UK data protection legislation and managed securely. If you would like to know more, including how to exercise your Rights, please see the UKRI privacy notice.

We will delete your data at the end of the selection process unless you are successful, in which case we will retain your data as an independent data controller. Please see the DESNZ Personal Information Charter for more information.