

# Energy Innovation Basecamp 2025

## Problem Statement EIP140

## Optimise Riser Replacement

The following problem statement has been developed by the innovation teams within the UK's Gas and Electricity Networks for the 2024 Energy Innovation Basecamp.

**Theme: Building Better and Faster**

**Network Areas: Gas Distribution,**

### What is the problem?

How do we improve our riser replacement program including refurbishment making it safer, cheaper and less disruptive ?

Managing gas riser replacements in multi-occupancy buildings presents significant challenges, including:

- **Scaffolding Requirements:** Traditional methods often necessitate extensive scaffolding, leading to increased costs and disruptions for residents. Scaffolding installations must comply with safety standards and may involve notifying insurance companies.
- **Access and Coordination:** Gaining access to individual units can be challenging, especially when residents are unavailable, complicating scheduling and prolonging project timeline
- **Safety and Compliance:** Ensuring that new installations meet current safety standards, such as those outlined in IGEM/G/5 Edition 3, is critical. Compliance with regulations requires thorough planning and execution.
- **Disruption to Residents:** Riser replacement work can disrupt daily routines, particularly for vulnerable residents. Minimizing inconvenience is essential to maintain good relations and ensure safety.
- **Technical Challenges:** Replacing risers in older buildings may involve dealing with outdated infrastructure, requiring specialized solutions to integrate new systems effectively.
- **Cost Management:** Balancing the need for safety and compliance with budget constraints is a constant challenge. Cost-effective solutions are necessary to manage resources efficiently.

### What are we looking for?

We are seeking new and creative innovative ideas that will drive innovation in improving how riser replacement is carried out from the replacement itself to surveying:

- Develop methods to minimize or eliminate the need for scaffolding to reduce costs and resident disruption.
- Develop solutions to efficiently gain access to individual units.
- Utilize materials and technologies that enhance the safety and longevity of gas riser installations while minimising noise, dust, and other disruptions during replacement activities.

### What are the constraints?

Solutions must be:

- **Regulatory Compliance:** All solutions must adhere to existing safety regulations and industry standards, such as those outlined in IGEM/G/5 Edition 3.
- **Technical Feasibility:** Proposed methods should be applicable across various building types and compatible with existing infrastructure.
- **Budget Limitations:** Innovations must be financially viable within the constraints of allocated budgets.
- **Time Efficiency:** Solutions should aim for rapid implementation to reduce downtime and inconvenience to residents.

### Who are the key players?

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- Gas Distribution Network Operators (DNOs): Companies responsible for the maintenance and operation of gas distribution networks.
- Regulatory: Organizations like the Health and Safety Executive (HSE), Building Safety Regulator (BSR) and the Gas Safe Register
- Industry Associations: Institution of Gas Engineers and Managers (IGEM) that provide guidelines and best practices.
- Technology Providers and supply chain: Companies specializing in advanced repair materials and techniques, including robotics and non-intrusive repair methods.
- Academic and Research Institutions: Entities conducting research on innovative gas infrastructure maintenance solutions that could be applied to gas risers for multiple occupancy buildings.

### **Does this problem statement build on existing or anticipated infrastructure, policy decisions, or previous innovation projects?**

- Regulatory Frameworks: Aligns with safety and operational standards set by regulatory bodies, ensuring compliance with current legislation.
- Industry Standards: Adheres to guidelines such as IGEM/G/5 Edition 3, which outlines best practices for gas installations in multi-occupancy buildings.

### **What else do you need to know?**

Innovator submissions to this problem statement will be open [here](#) during March and April, but we encourage you to submit your response as early as possible, as networks will be able to review submissions as soon as they come in.

You can also use the virtual Q&A on the Smarter Networks Portal to ask for more information about this problem statement. Questions may be answered online or at the ENA Problem Statement Launch in March 2024. More information on last year's Basecamp programme can be found [here](#).