Energy Innovation Basecamp 2026
Problem Statement EIP178

Generator Protection

The following problem statement has been developed by the innovation teams within the UK's Gas and Electricity Networks for the 2026 Energy Innovation Basecamp.

Theme: Maximising Use of Existing Infrastructure

Network Areas: Electricity Distribution, Electricity Transmission, Electricity System Operator, Gas Distribution, Gas Transmission (Delete as Appropriate)

What is the problem?

What is the wider context of the problem described above? Are there any specific details to expand on? If the problem statement is phrased as a question, this section may end by posing that question back to the innovator.

SSEN use a wide range of generators for both planned and unplanned shutdowns. These generators could be placed in any location, and this often means they are left in remote and isolated areas, which leave them vulnerable to theft or damage. When a generator is damaged, it means the whole set needs to be replaced and repairs need to be completed. This removes the set from the fleet and could result in delays to planned work or customers experiencing longer unplanned loses of supply.

There is a particular problem with the leads being stolen – a form of copper theft. We have experience numerous issues of this happening with safety implications and further loss of supply for customers. We are especially looking for a solution to this issue.

What are we looking for?

What kind of solution do you want? What TRL are you looking for? Does the solution need to be operable at scale? Are you looking specifically for methods and techniques? Does the idea need to have been tested to a certain extent already? There may be A) and B) sections if there is a wider issue with different types of solutions being sought.

We are looking for solution which could help reduce, mitigate or eliminate the damage caused by theft or criminal damage to our generators when they are being utilized. This could be a project or a fast follow solutions utilised by other industrials for the protection of heavy plant like generators.

What are the constraints?

These might include "the solution must…" type responses (e.g., compliance with certain regulations, existing software, methodology or technology - or technology agnostic - applicability to specific networks, budgetary requirements, needing to be rolled out within a specific timespan…)

The solution would need to be portable enough to be stored and moved with the generators and light enough that it could be installed by the crews on site.

Any digital solution would need to comply to all our cyber security policies and be available to our control room and depot environments.

Who are the key players?

Who are the key stakeholders affected by this problem statement? Who will adopt this solution? Who benefits from the resolution? What sort of innovators are you trying to attract solutions from? Who is the target market for this problem statement?

Key stakeholders would be internal SSEN teams. These teams would likely be our Connections department and Network Integrity teams, both have the main roles of overseeing planned and unplanned work.

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

What are the links to previous or ongoing work? Where possible, please provide links to the SNP, individual pages on network websites describing similar work, etc. Are there any current or future dependencies? Are there any other enablers that innovators should reference or specifically build on in their proposals? Are there any solutions which have already been considered / trialled?

This does not build on any specific work either on SNP or within SSEN.

What else do you need to know?

Use this space to add anything else that an innovator would need to know to submit a submission to this problem statement. This may be additional context on the issue, additional sources of information, additional information about your network's processes, or any additional enablers and constraints.

Innovator submissions to this problem statement will be open on the Smarter Networks Portal from 4th February to the 13th March, 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 on 4th February 2026. More information on last year's Basecamp programme can be found on the Smarter Networks Portal.