

Corrosion of Coastal Assets

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: Maximising Use of Existing Infrastructure

Network Areas: Electricity Distribution, Electricity Transmission, Gas Distribution

What is the problem?

Switchgear erosion due to proximity to the sea - we have found that electrical assets, particularly within the distribution network, such as switchgear, Pole Top Equipment and both pole and ground mounded transformers seem to be eroding quicker in coastal areas due to high salt content in the air from the sea, and degrading at a much faster rate than their inland counterparts. This issue is causing significant corrosion particularly to the bodywork and brackets of pole mounted transformers and some switchgear equipment.

What are we looking for?

We are looking for any way to reduce the rate of degradation and impact that the high salt content has on the speed of corrosion on these assets located by the sea. Is there a way to extend the lifetime of switchgear, by using an external coating? Or is there a specific type of switchgear less susceptible to salt? etc.

What are the constraints?

The solution must be in compliance with both company and industry regulations and standards.

Who are the key players?

Utilities who have assets located by the sea would benefit from this project however predominantly Electricity Distribution Network Operators would be the main stakeholders in this project.

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

May relate to 'Coastal Flooding and Erosion' NGET Call for Innovation. It will provide a modelling solution i.e. monitoring risk and data collection, rather than provide a saline-proof coating etc.

What else do you need to know? / Other Information

Would be interested to see how other industries such as offshore oil and gas for example could help.

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](#).