

Minimising Visual (and Environmental) Impact of New Network Infrastructure

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: Electricity Transmission

What is the problem?

The consenting of new major infrastructure is a controversial and debated public topic. Objections to environmental impacts, including visual impact, are leading to objections to planning consent. Transmission towers and overhead lines have the largest visual impacts.

Generally, infrastructure is designed to a traditional lattice tower that has been established for many years. The visual impact of OHL lattice towers has not changed.

What are we looking for?

- New designs that reduce the visual impact of OHL lattice towers.
- Novel ideas that can help blend lattice towers into the landscape
- Tools that allow optimised routing that facilitates reduced visual impacts on local stakeholders. *Please note we have a separate problem statement related to automated routing*
- Any radical change to the design of the network that may reduce the impact on key stakeholders
- Reducing environmental impacts of new infrastructure using novel construction methods or materials.

What are the constraints?

Solutions must not degrade the performance and capacity of transmission lines. Solutions must be cost-comparable with existing designs.

Who are the key players?

- Networks
- ESO/FSO
- General public
- Local councils and planning officers
- Government

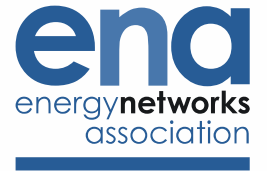
Does this problem statement build on existing or anticipated infrastructure, policy decisions, or previous innovation projects?

As far as we are aware, there are no solutions, other than camouflage painting, available on the market. SSEN-T have designed and are implementing low-profile poles for 132kV transmission: [Low Profile 132kV Steel Poles | ENA Innovation Portal \(energynetworks.org\)](#)

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.

Energy Innovation Basecamp 2024

Problem Statement EIP106



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](#).