

## Modular Standardised Bulk Supply Points (BSP)

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 Distribution**

### What is the problem?

It takes multiple years for a 132 kV connection to go from application to energisation. At the site, substations' works encounter hurdles such as obtaining planning permission for large areas of land, with lead times of around 2 years for transformers and difficulties with gas insulated switchgear leaks and emissions. Substation designs are usually bespoke with no set packages of equipment.

Concurrently, it is expected that significantly more connections at 132 kV will be required to meet net zero for generation, demand and mixed sites.

Can we alleviate the time, cost and planning of 132 kV connections with standardisation?

### What are we looking for?

We are looking for a standardised, modular 132 kV substation design solution that can be applied to wide variety of use cases for 132 kV connections, through a small number of standardised variants. Consideration of firm vs non-firm variants would be welcome.

### What are the constraints?

- The new solution must be competitive in terms of cost, time to install and/or footprint to traditional 132kV substations
- The solution must ensure that the DNO can comply with applicable legislation, licence conditions and network standards to ensure the safety of the public and network assets
- The solution must be agnostic or adaptable to import and export connections, including both at the same site
- The solution should be agnostic to the point of connection to the network
- The solution should avoid the use of SF<sub>6</sub> gas as an insulating medium.

### Who are the key players?

Key stakeholders are:

- Large connection developers
- Green investors
- Landholders
- Local authority planners
- Transformer and switchgear manufacturers and innovators
- Independent connection providers (ICPs)
- DNOs and IDNOs

The expectation that development will include customer engagement and research to identify the requirements for the solution and ensure that it is tailored towards these use cases. These customers will be the main beneficiaries, enabling them to connect the network more quickly, cheaply and/or with less land.

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

# Energy Innovation Basecamp 2024

## Problem Statement EIP103

Standardisation of substation is the norm at LV, following a transition from bespoke substations with separately chosen components.

The [Take Charge NIA](#) project developed a compact substation at 33/11kV for motorway service stations as a demonstrator of how standardisation can be approached at EHV.

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

Innovators should be aware of DNO obligations to facilitate Competition in Connections when evaluating the business model for commercialisation of any eventual solution.

**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](#).**