

Strategy and Policy Statement for Energy Policy in Great Britain

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About SuperNode and Superconductors

SuperNode, headquartered in Dublin, Ireland, is a global technology development company that designs and delivers cutting-edge, superconducting cable systems for bulk electricity transmission.

Conventional transmission cables are limited in terms of current levels which in turn limit their power transfer capability. Networks based upon superconducting cable systems can move larger quantities of power over longer distances with smaller and less obtrusive infrastructure, without electrical losses and at significantly lower voltages. SuperNode's technology will connect electricity markets in a way that facilitates the integration of large-scale renewables and the achievement of a decarbonised pan-European energy system.

SuperNode was founded in 2018 by Dr. Eddie O'Connor and renewable energy developer Mainstream Renewable Power Ltd. SuperNode is jointly owned by Dr. O'Connor and Norwegian green investment group AKER Horizons.

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1. Consultation Question 1

Does the strategy and policy statement identify the most important strategic priorities and policy outcomes for government in formulating policy for the energy sector in Great Britain? If not, please provide details of the priorities that you think should be included.

The rapid build out of the UK's network infrastructure based on long term strategic planning will be critical to achieving National Targets and ultimately net zero. The SPS does a great job in outlining crucial priorities and Government outcomes and we especially welcome the following points:

- Driving the net zero transition by achieving government targets for renewable and low carbon deployment, innovation and uptake of clean technologies, and providing opportunities to increase energy efficiency.
- Competitive and effective markets and regulation that facilitate the anticipatory investment required in innovation, clean technologies, and infrastructure to meet government's net zero targets while ensuring an appropriate balance between economic, environmental, and social costs, and addressing undue barriers to entry, growth and innovation.
- Barriers to multi-purpose interconnectors and other hybrid or novel assets are removed, and interconnectors operate as efficiently as possible.
- Strategic network plans take a whole system approach, including early consideration of the deliverability, economic cost, and environmental and social impacts.

However, there is some clarity missing around the UK's connection with Europe and the European energy system. The SPS states as a priority that:

*'Network infrastructure is reliable, resilient, sustainable and **appropriately** connected to other markets'.*

The SPS used the term 'appropriately connected to other markets'. It is unclear what this means in a practical sense. There are multiple references throughout the SPS to interconnectors, multi-purpose interconnectors and hybrid assets so it is clear that the UK has plans for interconnection. However, deep interconnection with a pan-European energy system is absolutely critical for the optimal operation of a predominantly renewable-based energy system and thus the timely success of the energy transition.

The UK is moving towards a coordinated, holistic planning regime and energy system and it is clear now that the government understands the value of this approach. Some of the benefits of a coordinated approach are long term stability and reliability of electricity supply, an optimised location of renewable generation and transmission infrastructure, minimising dispatch down and the excessive use of infrastructure, landing points and environmental impact, creating the most secure and cost effective energy system.

The benefits of a coordinated system do not just apply to the UK system but would apply on a much greater scale with a European energy system based on variable or intermittent renewable energy such as wind and solar. It is in the UK's and its European Neighbours interest to prioritise deep interconnection as part of a pan-European energy system and to thus reap the shared benefits.

Furthermore, the UK can become a significant net exporter of power as part of this interconnected grid. The UK's offshore renewable resources are some of the best in the world. The UK could become the backbone of Europe's energy system, thereby replace Russia as its primary energy supplier by providing renewable power to Europe's major demand centres. Such a strategy would provide consistent and substantial economic returns for UK citizens, industry, consumers and the UK government.

The SPS should, therefore, place a greater priority and outline clear intentions on how the UK plans to become a core participant and leader of a pan-European grid.

Thank you for the opportunity to respond to this consultation. SuperNode look forward to engaging with the Department of Energy Security and Net Zero on future topics.