



# ***HMG's chance to deliver green energy both swiftly and effectively***

**Offshore Energy Solutions**

*The faster, cheaper way to Net Zero*





## HMG's chance to deliver green energy both swiftly and effectively

2025

At present, the Government (HMG hereafter) still has the chance to initiate the creation of an integrated onshore-offshore grid with our neighbours. Pursuing an onshore-offshore grid, rather than rushing ahead with suboptimal, disjointed, short-term plans, will deliver the best possible infrastructure solutions for Britain. Solutions that are ultimately more sustainable (ecologically and socially), long-term, and cost-effective.

However, to make this happen, reforms are required to break down barriers to modernise our energy infrastructure.

Meanwhile, in the immediate term, there are projects ready for delivery that will contribute to meeting our 2030 clean energy targets. As a start, we recommend that both [LionLink](#) and [Sea Link](#) (two highly significant projects in the context of an offshore grid) are paused whilst HMG evaluates, and then undertakes, the following reforms with a sense of urgency:

### 1. Updating Ofgem's mission

Ofgem's current criteria used for evaluating a project needs to become more holistic. Its focus on short-term consumer price is a limiting criterion resulting in an unhelpfully narrow approach to the big questions around the delivery of innovative offshore grids. Assessing the cost of pylons versus subsea cables is not the relevant sum to be calculating. Whilst National Grid focuses on this because National Grid Energy Transmission (NGET) is responsible for onshore transmission, HMG should examine the **overall** costs, including costs of offshore converter platforms, as well as the significant savings to be made **by reducing onshore infrastructure by over 50%**.

There is currently no obligation to carry out comparative option assessments. If a developer's project meets the financial requirements, Ofgem does not look any further or wider. This approach results in short-term consumer price led decisions being taken.

We contend that if a holistic cost-benefit analysis is conducted, energy economists will reject the current preference onshore converter stations in favour of innovative technological solutions, such as offshore converter stations and onshoring energy at pre-industrialised sites closer to dense populations and demand, as these are more cost-effective in the long run. Especially as cumulative error is inevitable if individual component parts are costed but not the overall project.

Elia (Belgium) and Tennet (The Netherlands) are experienced pioneers in offshore energy infrastructure. Britain may have bigger wind farms, but the same principles apply, and can be readily deployed, just on a larger scale.

### 2. The technology is ready, and Britain must get in the queue

New technology is already available. Subsea cables can now transmit 3GW and shortly 10GW superconducting cables will be possible.

Offshore converters are already being built for Germany. Britain can use these Hitachi innovations for its geographical part of Lion Link.

### 3. Resolving compatibility issues

Other North Sea countries and Britain are currently working on solutions to resolve compatibility issues. Siemens, GE, Hitachi and others may need to align themselves using harmonised systems.

Pan-European pricing will need to be resolved as pooling energy requires a standardised pricing system. Meanwhile, developers will need to work together more than ever before.

### 4. De-monopolising the market

Freeing up the market is urgently needed. National Grid PLC has close to a monopolistic position in Britain. The time has, therefore, come for more diversity, and more engagement with the other innovators in the market.

There are investors who have expressed interest but there is no forum for them to access new green energy opportunities.

## 5. Undertaking pilot tests

Over the last three years, we have been advocating that LionLink should be chosen as one of the first offshore grid projects. The Dutch section of LionLink already includes an offshore converter platform, whilst the British part does not currently feature one although the fourth point has been detailed in the concept plans.

ScottishPower's EA1N and EA2 could then be the first wind farms to be integrated into the offshore grid created for LionLink, which would render their respective planned onshore substations redundant (saving time and money as well as protecting nature and being supported by local communities).

Finally, Nautilus could be part of a second part of a pilot test, integrating North Falls and Five Estuaries into an integrated offshore grid.

## 6. HMG should be both facilitator and master planner

For decades, new energy projects have been created in a vacuum. There has been no master plan for the delivery of offshore wind or the import-export opportunities. HMG has already made positive steps to resolve this by setting up of NESO.

Clean Power 30 Commission has potential if it understands that a spatial energy plan is not a simple question of the percentage allocation of different types of energy fulfilling net zero needs. Its most important task is as an architect designing a framework for future needs. Core Design Principles are essential to halt an "anything goes" attitude<sup>1</sup>. Any net zero 2030 objectives should not be a barrier to making the first steps towards an integrated offshore grid.

A team of objective expert advisers possibly from Elia or Tennet should be consulted to provide much needed guidance.

## 7. Getting energy economists onboard

The Energy Security and Net Zero Committee, in addition to the Department for Energy Security and Net Zero, Select Committee, should have the appropriately qualified energy economists to undertake a holistic cost-benefit analysis when it comes to new green marine energy related projects.

We believe that, according to Ofgem's March 2024 Offshore Hybrid Assets report, **over 50% onshore infrastructure will be redundant if we opt for the integrated offshore grid**. As such, why would we build any onshore converters if we can build them offshore (close to the shoreline<sup>2</sup>).

Sea Link may be a white elephant project, costing £1.8billion. If the energy does not come to a low-density population site in the first place, Sea Link is redundant. The North Sea Corridor is an attractive arterial corridor for bringing energy directly to where the demand is located.

## 8. Instigating advanced financial investment schemes

Developers will need more upfront finance incentives as the current system does not motivate developers.

The risk should be shared with Great British Energy and second stage investors.

## 9. Communities to be included in the Hub site selection process

Nick Winsor's report signals several process changes for the better.

There will be fewer delays if Hub sites are discussed openly at the very outset with communities who have valuable knowledge about their locality.

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<sup>1</sup> See SEAS Core Design Principles in our [Great British Offshore Grid](#) proposal (page 6) for further details.

<sup>2</sup> Offshore converter platforms should be built near shore for security reasons.