On Helgoland, Dutch and German research join forces

North Sea Energy and SOffie, 16–18 September 2026

From 16 to 18 September, North Sea Energy, the German research programme SOffie and partners from the Netherlands and Germany met on Helgoland. After an international exchange in Brussels earlier this year, the dialogue continued with three days on offshore wind and hydrogen, system integration, investment and policy, and knowledge sharing. Running through it all was one question: **how can Dutch and German work on offshore wind and hydrogen reinforce each other instead of running in parallel?** The clearest outcome is a concrete one. The two programmes will write a joint paper on offshore hydrogen.



Helgoland's harbour, seen from the upper part of the island.

An island with its own hydrogen ambitions

Helgoland was a deliberate choice. The island lies in the middle of the German Bight, has around 1,300 inhabitants and has been selected for an early German pilot on offshore hydrogen production. It also sits close to the area where AquaVentus and the planned AquaDuctus pipeline aim to bring large-scale

offshore hydrogen to shore. For a meeting about connecting offshore wind, hydrogen and infrastructure across borders, it is hard to think of a better setting.



Heading back down to the harbour between sessions.

René Peters of the NSE programme management team was struck by how concrete the local plans already are. “Around 1,300 inhabitants, and still it wants to play an important role in Germany’s future energy system. Quite impressive.”

Two programmes, one sea

SOffie, short for System Integration of Offshore Wind Energy, is a German research programme in which universities and research institutes use energy system modelling and data analysis to explore how offshore wind, hydrogen production, infrastructure and energy markets can be integrated. North Sea Energy has worked on offshore system integration for around ten years, bringing together research institutes, companies and governments in a public-private programme.

On 16 September, the joint workshop opened with an introduction to both programmes, followed by two real-life cases: HyONE, presented by Gasunie, and AquaDuctus, presented by GASCADE. Short presentations from both sides then covered system analysis, business cases, legal challenges around interconnectors and supply chains. The aim was simple: researchers should understand the challenges practitioners face, and practitioners should be able to use what research is finding.

> *“It is impressive how many synergies there are between the SOffie and the NSE programmes. Exchanging insights between national research initiatives can really speed up the offshore energy developments.”*
>
> René Peters



Participants exploring the island’s beach during the programme.

When the numbers don’t line up

In the discussions that followed, one problem kept coming back. Investment cost estimates for offshore hydrogen diverge so widely that studies are hard to compare, and conclusions depend heavily on which numbers you start from. Three directions stood out as the way forward.

The first is agreement on codes and standards for data, combined with sharing that data openly. Common terminology and data that is findable, accessible, interoperable and reusable were seen as the basis for everything else. Without them, collaboration depends on goodwill. The second is an independent check on the data and assumptions behind models and studies. Where companies cannot share cost data for reasons of confidentiality, aligning on assumptions is a workable alternative. The third is a stronger role for governments, which already hold concrete levers: they can make open data a condition of public funding and ask for demo learnings in tender requirements.

Participants also pointed to the silos between research and policy. Suggestions ranged from short policy two-pagers instead of full reports to a shared North Sea platform for research and knowledge exchange.

> *“Countries can really complement each other and genuinely accelerate things by working together more closely.”*
>
> René Peters

A Dutch-German agenda

The second question, where the Netherlands and Germany could build joint ambition, received less time but produced some promising ideas. One was a hydrogen research and development programme that the Netherlands could set up together with Germany, with links to the EU and the United Kingdom. The cooperation between Gasunie and GASCADE around HyONE and AquaDuctus was named as an example of the cross-border partnerships that are already taking shape.



Offshore wind components on their way across the North Sea.

From workshop to joint paper

On the final day NSE and SOffie sat down again to turn the exchange into something tangible: a joint paper on offshore hydrogen. It will review the scientific literature on the costs and development stage of offshore hydrogen from both a Dutch and a German perspective. Rather than adding yet another point estimate, the paper will map the ranges found in the literature and explain where they come from.

The proposed structure covers cost ranges, ecology, underlying assumptions, system integration and grid congestion, and drivers and barriers. Geopolitics was named as a new and relevant angle. The purpose is to put offshore hydrogen firmly on the map, with its main benefits and obstacles, and to help guide further research and policy. Because the debate is sensitive, the partners agreed the paper should be firmly grounded in research. Ideas for visuals include maps of cross-border opportunities and a dashboard for policymakers built on the most important parameters.



Helgoland's shoreline. Ecology is one of the themes of the joint paper.

What's next

A first writing session for the joint paper is planned for the coming period. Meanwhile, the international dialogue continues. After Brussels and Helgoland, NSE plans further exchanges with stakeholders in other North Sea countries, starting with the United Kingdom in 2027.

Closer to home, NSE hosts a side event at Offshore Energy 2026 in Amsterdam on 24 November. On 1 December, the NSE Deep Dive Webinar looks at cross-border infrastructure in the North Sea, with Robert Seehawer of AquaVentus among the speakers.

Helgoland was not a finished agenda, but a next step in a growing dialogue. It showed that researchers from different countries are asking the same questions about the same sea, and that answering them together is faster than answering them alone.