

# PROJECT BRITANNIA

Offshore Nuclear Hydrogen

## THIS IS BRITANNIA

A fact-driven national narrative for why Project Britannia is the logical next step for the UK

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**Purpose:** provide a clear, punchy public-facing story rooted in the Britannia project documents (White Paper & Charter). This text is written for MPs, ministers, media and the public.

*"I watched my friends lose everything when the pits closed in the 1980s. I won't stand by and watch the same thing happen to offshore workers. We have the platforms, we have the skills, and we have the technology."*

— Dave Waugh, retired engineer

*"For 200 years we powered Britain by digging up carbon and burning it. Britannia is the Circular Revolution: split water, use hydrogen, and return water to the sea — clean energy without destroying our home."*

### 1) The national problem we must solve

The North Sea is approaching an end-of-life moment. Under current plans, the UK faces large-scale decommissioning: platforms removed, pipelines cut, and a world-leading offshore workforce scattered. The Britannia White Paper cites major decommissioning costs (NSTA estimates) and material taxpayer exposure via decommissioning tax relief. If we scrap everything by default, we don't just remove steel — we remove a national capability.

### 2) Britannia's simple proposition

Repurpose selected end-of-life platforms into offshore hydrogen hubs. Power them with UK-designed Small Modular Reactors (SMRs), with Rolls-Royce as the leading UK example, and produce reliable, low-carbon hydrogen at industrial scale.

**The Britannia architecture** (as set out in the White Paper):

- 1 central reactor platform hosting a UK-designed SMR — enough to power a major industrial cluster.
- 4 hydrogen production platforms within ~2–5 km, equipped with desalination and electrolysis (e.g. PEM) plus gas purification and compression.
- **Safety by separation:** physical distance reduces the risk of cascading incidents and supports manageable offshore safety zones.
- **Order-of-magnitude output:** ~40,000–50,000 tonnes of hydrogen per year per cluster (with valuable co-products including oxygen).

### 3) Why it is logical for the UK

| Energy security that works in winter                                                                                                                                                                                                                                                                                                                                                                 | Jobs, skills, and sovereignty                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <ul style="list-style-type: none"><li>• <b>Weather-proof baseload:</b> nuclear power runs day and night, through winter peaks and calm periods.</li><li>• <b>Hydrogen as strategic storage:</b> produce hydrogen continuously and store it to cover low-wind/low-sun periods.</li><li>• <b>Less import exposure:</b> reduces vulnerability to geopolitical supply shocks and price spikes.</li></ul> | <ul style="list-style-type: none"><li>• <b>Just transition:</b> preserves offshore careers in key regions (Aberdeen, Teesside, Humberside) rather than repeating past industrial collapses.</li><li>• <b>UK control:</b> the Britannia Charter sets principles for UK ownership, UK jobs first, and UK regulatory jurisdiction.</li><li>• <b>Build once, benefit for decades:</b> turn decommissioning liabilities into productive national infrastructure.</li></ul> |

### 4) The circular economy point (the big idea)

Britannia aligns with a circular model: use energy to split water, move hydrogen to where it is needed, and when hydrogen is used in turbines or fuel cells the output is water again. The system can also valorise co-products (oxygen, brine streams, and waste heat), reducing routine discharge and maximising value from every output.

#### The choice, stated plainly:

- **Scrap everything:** pay to remove assets, lose offshore capability, and become more dependent on imported energy and global volatility.
- **Build Britannia:** repurpose what we already have, keep high-skill jobs, and create a resilient domestic supply of low-carbon hydrogen.

**Britannia is not just an engineering project. It is a national mission:** keep control of our energy future, protect coastal communities, and move from a "burn and destroy" economy to a circular one.

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**Document title:** This is Britannia

Prepared for discussion and public briefing • Based on the Britannia White Paper and Britannia Charter provided in-project materials.

PROJECT

# BRITANNIA

*Offshore Nuclear Hydrogen*

## Media Fact Sheet: By the Numbers

### THE PROBLEM

**470**

End-of-life platforms in UK waters facing decommissioning

### TAXPAYER EXPOSURE

**£24bn**

UK taxpayer exposure in decommissioning tax relief

### CLEAN HYDROGEN OUTPUT

**40,000–50,000**

Tonnes of hydrogen per cluster annually — enough to power major industrial operations

### CARBON FOOTPRINT

**5–15g**

CO<sub>2</sub>-eq/kWh lifecycle emissions — comparable to wind and solar

### OXYGEN BYPRODUCT

**350,000**

Tonnes of saleable oxygen per cluster per year (industrial & medical use)

### JOBS IMPACT

**Thousands**

Skilled offshore jobs preserved + new positions in hydrogen production & export

### ZERO WASTE CIRCULAR ECONOMY

**Every output has value:** Oxygen sold to industry • Brine converted to de-icing agents & chemical feedstocks • Waste heat utilized in production • Potential lithium extraction as

## Implementation Timeline

### Phase 1 2025–2027

**Regulatory Framework & Feasibility:** Establish regulatory pathway, conduct structural surveys, engage stakeholders, develop Skills Passport framework

### Phase 2 2028–2032

**First Demonstration Platform:** Detailed engineering, SMR installation, platform conversion, hydrogen production trials

### Phase 3 2032+

**Fleet-Scale Deployment:** Roll out across suitable platforms, expand infrastructure, scale workforce. Target: 10-20 clusters by 2040

### TARGET REGIONS

**Aberdeen:** Offshore supply chain hub, world-leading engineering expertise

**Teesside:** Existing hydrogen infrastructure, industrial demand from chemicals & steel

**Humberside:** Major industrial cluster, offshore wind integration potential

### SAFETY FEATURES

**Passive Safety SMRs:** Inherent safety features requiring no active intervention

**Distributed 1+4 Layout:** Reactor separated 2–5 km from hydrogen platforms

**Proven Technology:** Based on decades of safe Royal Navy nuclear operations

### For More Information

Project Britannia represents a community-driven solution to the energy transition challenge, grounded in decades of offshore operational experience.