



**WORKING
TOGETHER
FOR A LOWER
CARBON FUTURE**

THIS IS A ONCE IN A GENERATION OPPORTUNITY

The Solent Cluster partnership represents an incredible opportunity for local communities, the region, and the UK, and can affect real change in sustainable energy production and consumption.

We will play a fundamental role in the world's fight against climate change, supporting the UK in reaching Net Zero emissions by 2050.

The Solent Cluster is the only project of its kind in the region and is backed by companies with the technical expertise and global track record of delivering cost effective low carbon solutions. This effort could position the Solent at the centre of low carbon fuel production in the UK and make a major contribution to the country's Net Zero ambitions by 2050.

Together we can create a hub of expertise and innovation that will enable the development of a new hydrogen and lower carbon energy facility creating sustainable fuels for marine, aviation and transport as well as providing low carbon power to heat homes, businesses, and public buildings in our region and beyond.

WE ARE THE SOLENT CLUSTER

The Solent Cluster founding members Solent Local Enterprise Partnership, ExxonMobil, the University of Southampton and all of its members will help drive and implement the first major decarbonisation initiative that would substantially reduce CO₂ emissions from industry, transport and households across the Solent and Southern England.

PROJECT TIMELINE

Opportunity to create UK South Coast Low Carbon Hub by 2030, building on the recently launched Solent Freeport.

2020
2030

Develop a hub of expertise and innovation that will produce hydrogen fuel for industry, aviation, maritime and transportation as well as commercial and domestic power and heating.

Enable capture and safe storage of CO₂ emissions.

Drive economic growth, protect skilled jobs and create new employment opportunities.

Help UK business remain competitive within the global market, while supporting energy resilience, fuel security and affordability.

2030
2040

2040
2050

Make a major contribution in the transition to Net Zero and help position the UK at the cutting edge of clean energy innovation and production.

Play a major role in powering a sustainable future for industry, transport, homes and businesses in the local community, the region and the UK.

THE SOLENT CLUSTER POTENTIAL THROUGH PARTNERSHIP

Opportunity to create UK South Coast Low Carbon Hub by 2030, building on the recently launched Solent Freeport.



HEATHROW, GATWICK AND BIRMINGHAM

WASTE TO SUSTAINABLE AVIATION FUEL (SAF)

WORLD SCALE BLUE HYDROGEN

RESEARCH PROGRAMMES

LOWER EMISSION FUELS

INNOVATION PROGRAMMES

HYDROGEN FUEL FOR HOMES

GREEN HYDROGEN

FAWLEY

SOLAR

TIDAL

DECARBONISE INDUSTRY

TECHNOLOGY PROGRAMMES

ALTERNATIVE ENERGY SOURCES FOR TRANSPORTATION

FAWLEY

CCS DELIVERED TO FAWLEY FOR STORAGE

PIPELINE TO CARBON CAPTURE AND STORAGE

WASTE TO METHANOL SHIP FUEL

Together we can:

- Become a leading area for low carbon investment, now and for the future
- Bring new jobs and investment for the benefit of our communities
- Help secure existing jobs and livelihoods
- Help the UK remain competitive and deliver on national energy priorities
- Foster new technology, research and innovation
- Support UK energy security
- Make a major contribution in the UK's move to Net Zero

PLAYING OUR PART IN BUILDING A NET ZERO FUTURE FOR THE UK

The Government has set targets for the UK to reduce its carbon dioxide emissions to Net Zero by 2050 and has identified six decarbonisation zones.

The creation of clusters within these zones enables local industries, businesses and communities to create decarbonisation solutions to best suit their regional requirements and support the UK decarbonisation strategy.

At present two clusters have been formally recognised by Government with a target of four in total. Establishing The Solent Cluster is a critical step in enabling organisations to bid for government investment support for projects to decarbonise the Solent region.

To begin the essential decarbonisation of the region as quickly as possible, we need to work together to reduce CO₂ emissions from our local industries, this will include carbon capture and storage (CCS).

By developing our ability to produce and deliver lower carbon fuels and energy, through reliable supplies of hydrogen, our plans will also help UK business remain competitive within the global market, while supporting energy resilience, fuel security and affordability.

By supporting local industry to create sustainable production processes, we can position the South Coast region as a leading clean energy hub.



HELPING THE UK ACHIEVE A NET ZERO CARBON ECONOMY BY 2050

Hampshire and its marine gateway, the Solent, is one of the largest and most successful industrial areas in the UK, supporting around 90,000 businesses and a £50bn economy.

With around 200,000 large vessel movements each year, the ports of Southampton and Portsmouth are

major trade and commercial hubs connecting the UK with the global economy. Our region is also close to the UK's busiest airports.

Working together we can help this vital industry to reduce its carbon dioxide emissions and meet its ambitions for a lower carbon future.

40%

of all industrial CO₂ ever captured (120 million metric tonnes in total) has been successfully captured by one of our founding partners, ExxonMobil.

Up to

10

million tonnes

of CO₂ captured per year by this project, which is the equivalent to taking 3.75 million cars off the road.



NEW FUELS FOR A NEW FUTURE

Through new hydrogen production facilities, the Solent can lead the way in creating low carbon fuels for the maritime industries, on which much of our region's economic prosperity depends. Uniquely, it can also put the Solent at the heart of Sustainable Aviation Fuel production in the UK, leveraging new pipeline connections to Heathrow and Gatwick airports that are already under construction, supporting that sector's transition to Net Zero as well as its £22bn contribution to GDP.

And closer to home, delivering on our plans will also secure the future of the existing Fawley site, protect many jobs across the Solent area and create new highly skilled jobs and training opportunities as we transition to a sustainable, Net Zero future.

One of the most successful industrial areas in the UK, supporting around 90,000 businesses and supplementing the economy by

£50bn

LOCAL SIGNIFICANCE, GLOBAL IMPORTANCE

The Solent Cluster could enable organisations to bid for government investment support for projects to decarbonise the Solent region and realise the benefits that can flow to the region's businesses and communities.

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As a result of its geography, geology, infrastructure and capabilities, the UK has an important opportunity to demonstrate global leadership in low carbon hydrogen and to secure competitive advantage. Building hydrogen production and enabling use across multiple sectors will be critical for developing domestic capacity and capabilities and securing green jobs across the UK.

The UK Government has committed to enable the transportation and storage of 20–30Mt of CO₂ per year by 2030.

20–30 million tonnes

OUR MEMBERS

The Solent Cluster is a truly cross-sector collaboration of regional and international organisations, many with decades of proven expertise in carbon capture, storage and hydrogen technology.

No other Cluster has such diverse members drawn from business and industry, academia and the public sector. Together, the partners can deliver the key elements of decarbonisation – knowledge, production and storage, distribution, and end user markets.





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