

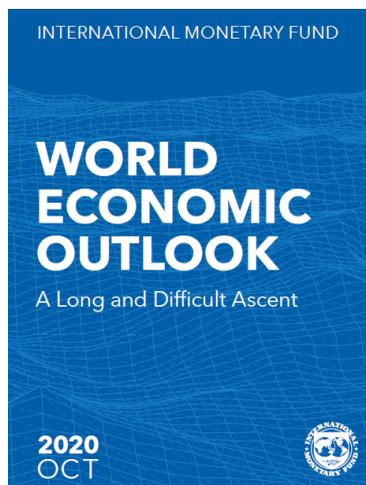
# Industrial Decarbonisation Research & Innovation Centre IDRIC

*Prof Mercedes Maroto-Valer*



1

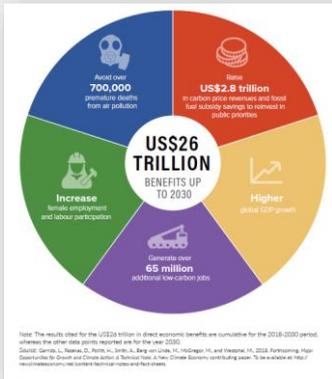
## ... not too late to change course



“ ...economic policy tools can pave a road toward net zero emissions by 2050 even as the world seeks to recover from the COVID-19 crisis.

2

## Benefits of a low-carbon economy



**THE NEW CLIMATE ECONOMY**  
The Global Commission on the Economy and Climate

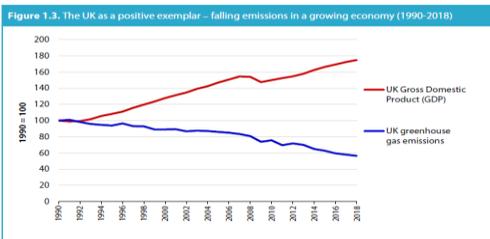
**UNLOCKING THE INCLUSIVE GROWTH STORY OF THE 21ST CENTURY:  
ACCELERATING CLIMATE ACTION IN URGENT TIMES**



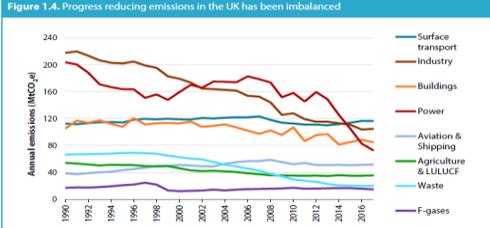
The UK low carbon economy could:

- grow by an estimated 11% per year between 2015 and 2030 – 4 times faster than the rest of the economy
- deliver between £60 billion and £170 billion of export sales of goods and services by 2030.

## UK net zero target



Source: BEIS (2019) Final UK greenhouse gas emissions national statistics 1990-2017; BEIS (2019) 2018 UK greenhouse gas emissions: provisional figures; ONS (February 2019) Gross Domestic Product: chained volume measure: Seasonally adjusted Em; CCC analysis.



Source: BEIS (2019) Final UK greenhouse gas emissions national statistics 1990-2017; CCC analysis. LULUCF = land use, land change and forestry.

## The Ten Point Plan for a Green Industrial Revolution



Building back better,  
supporting green jobs,  
and accelerating our path to net zero.



Point 1  
Advancing Offshore Wind



Point 2  
Driving the Growth of Low Carbon Hydrogen



Point 3  
Delivering New and Advanced Nuclear Power



Point 4  
Accelerating the Shift to Zero Emission Vehicles



Point 5  
Green Public Transport, Cycling and Walking



Point 6  
Jet Zero and Green Ships



Point 7  
Greener Buildings



Point 8  
Investing in Carbon Capture, Usage and Storage



Point 9  
Protecting Our Natural Environment



Point 10  
Green Finance and Innovation

5

## Industrial Decarbonisation Research and Innovation Centre

Solutions integrating  
technology, policy  
and business models  
Building back better



Collaborations at  
scale and pace  
Accelerating our  
path to net zero

Skills fit for  
the future  
Supporting  
green jobs

6

## UK funding mechanisms

Industrial Decarbonisation Challenge (IDC)		Transforming Foundation Industries Fund	Industrial Energy Transformation Fund (IETF)	Clean Steel Fund	Operational support mechanism (required)
SCOPE	Industrial CCS and fuel-switching. Sites within clusters.	Energy and resource efficiency	Industrial CCS, fuel-switching, resource and energy efficiency.	Steel	
FUNDING	£170m upfront public support (+ £260m matched from industry) to be spent by 2024.	£66m upfront public support	£315m upfront public support to be spent by 2024.	£250m from 2024 onwards	

Energy innovation funding: industrial fuel switching (£20m), CCUS (£20m), hydrogen supply (£28m)

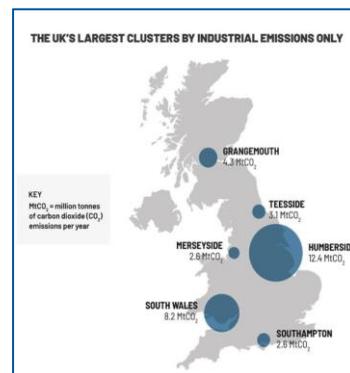
Reducing UK emissions Progress Report to Parliament  
Committee on Climate Change, June 2020

7

# IDRIC Industrial Clusters Mission

Establish at least one low-carbon industrial cluster by 2030 and the world's first net-zero carbon industrial cluster by 2040

- Clusters of large industrial plants for energy-intensive industries.
- The largest six clusters, recently mapped by the Industrial Clusters Mission, have high emission plants totalling around 40 million tonnes of CO<sub>2</sub> per year.
- Manufacturing businesses in industrial clusters often share infrastructure and resources (both supply chains and workforce).
- Industrial Decarbonisation seeks to harness the scale of the industrial clusters to **create opportunities to work together to find cost-effective solutions to decarbonisation.**



<https://www.ukri.org/innovation/industrial-strategy-challenge-fund/industrial-decarbonisation/#pagecontentid-1>

8

# IDRIC Industrial Clusters Mission

The Industrial Decarbonisation programme is funded by £170 million from the Industrial Strategy Challenge Fund which is expected to be matched by funding of up to £261 million from industry

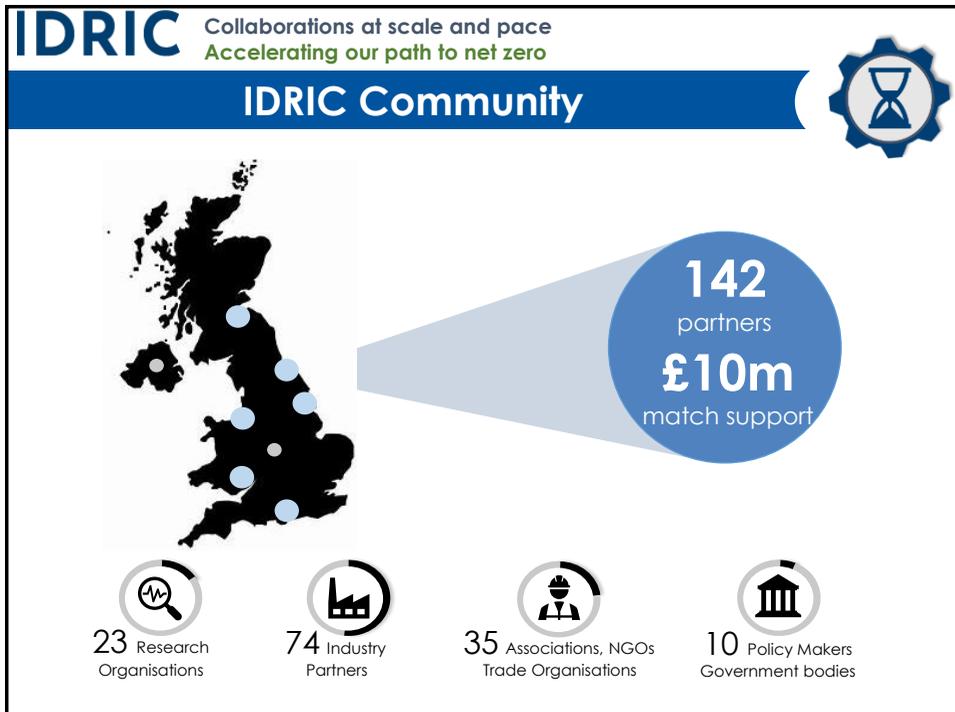
The ISCF challenge will be delivered through three different programme strands:

1. Industrial Demonstrators and Shared Infrastructure (£132m, Innovate UK)
2. Cluster Decarbonisation Roadmaps and Feasibility Studies (£8m, Innovate UK)
3. **Industrial Decarbonisation Research and Innovation Centre (£20m, EPSRC)**



[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/803086/industrial-clusters-mission-infographic-2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/803086/industrial-clusters-mission-infographic-2019.pdf)

9



10

**IDRIC** Solutions integrating technology, policy and business models  
Building back better

**IDRIC provides the supportive foundation for technology and policy development**



Identify, direct and coordinate research

Facilitate industry alignment

Enable implementation and impact

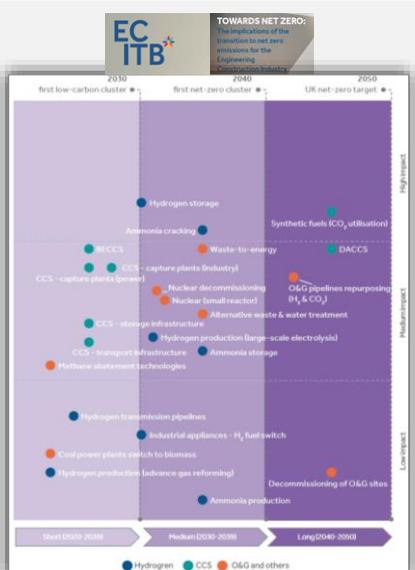
**Integrating technology, policy and business models**

- Reducing Costs
- Reducing Risks
- Reducing Timelines
- Reducing Emissions
- Economic Aspects
- Policy Aspects

11

**IDRIC** Skills fit for the future  
Supporting green jobs

**Skills for industrial decarbonisation**

**UK skills needs assessment** core and supply chain workforce needed to achieve net zero

**Provision for training and skills** needed to help industry recover and emerge stronger

**Framework for competency** through alignment to addressing decarbonisation challenges

**Knowledge and skills transfer** from energy sectors to emerging industries

12

# IDRIC

## How IDRIC can help UK reach its industrial decarbonisation goals

Transforming interdisciplinary research and innovation

Forming active networks of stakeholders

Growing our skills together

Sharing knowledge

Supporting policy

13

# IDRIC

## Collaboration is key



Chemistry & Industry  
October 2020, 10(2), 43  
<https://www.soci.org/chemistry-and-industry/cni-data/2020/10/accelerating-decarbonisation>



World Cement!  
August 2020, 41-44  
<https://www.worldcement.com/magazine/world-cement/august-2020/>



The Chemical Engineer  
July-August 2020, 34-35  
<https://www.thechemicalengineer.com/magazine/issues/issue-948/>



Steel Times International  
September 2020, 55-57  
<https://www.steeltimesint.com/issues/latest>

14

# IDRIC

*To find out more about IDRIC,  
please contact [info@idric.org](mailto:info@idric.org)  
or visit [www.idric.org](http://www.idric.org)*

Currently going through the final stages of assessment phase with UKRI, with full centre activities anticipated to start later this year following approval.

## IDRIC Team

### Industrial Decarbonisation Champion

- Professor Mercedes Maroto-Valer

### Project Manager

- Rob Abbey

### Business Development Managers

- Laura Finlay
- Alexandra McConnachie

 @IDRICUK  
 Industrial Decarbonisation