

# Net Zero North West Cluster Plan

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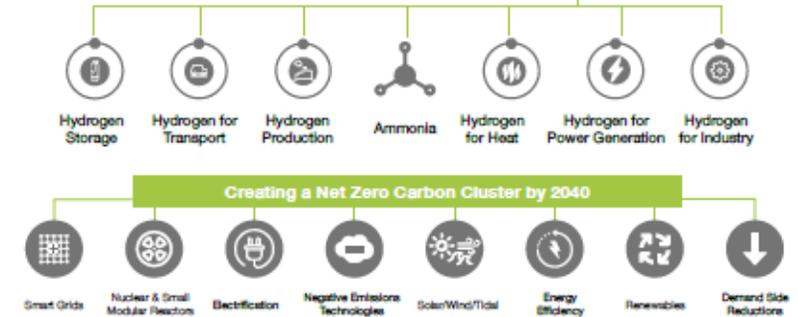
# Net Zero North West Cluster Plan

- The Cluster Plan sets out the pathway to Net Zero for the NW of England and NE Wales
- Provides the next level of detail underneath the Investment Prospectus which was launched in 2021
- Project team is made up of partners across industry, academia and government
- Collaborated across a number of areas to develop a detailed understanding of energy consumers, energy decarbonisation systems, hydrogen production, large scale power generation, distribution networks, skills & supply chain and investment

## NET ZERO NORTH WEST THE CLUSTER PLAN FOSTERING CLEAN GROWTH

Creating the UK's first Low Carbon Industrial Cluster by 2030

Carbon Capture Usage and Storage → H2



Setting out the transition to Net Zero Carbon for the North West of England & North East Wales.



The Cluster Plan will prepare the area for a cleaner future.

> 10 MILLION TONNES CARBON SAVED BY 2030

ENSURING A JUST TRANSITION TO NET ZERO CARBON OVER 33,000 JOBS OVER £4BN INVESTMENT CLUSTER PLAN BY 2022 FULFILLING THE INDUSTRIAL CLUSTERS MISSION

> 40 MILLION TONNES CARBON SAVED BY 2040

# Industrial Decarbonisation Roadmap – “Waterfall to Net Zero”

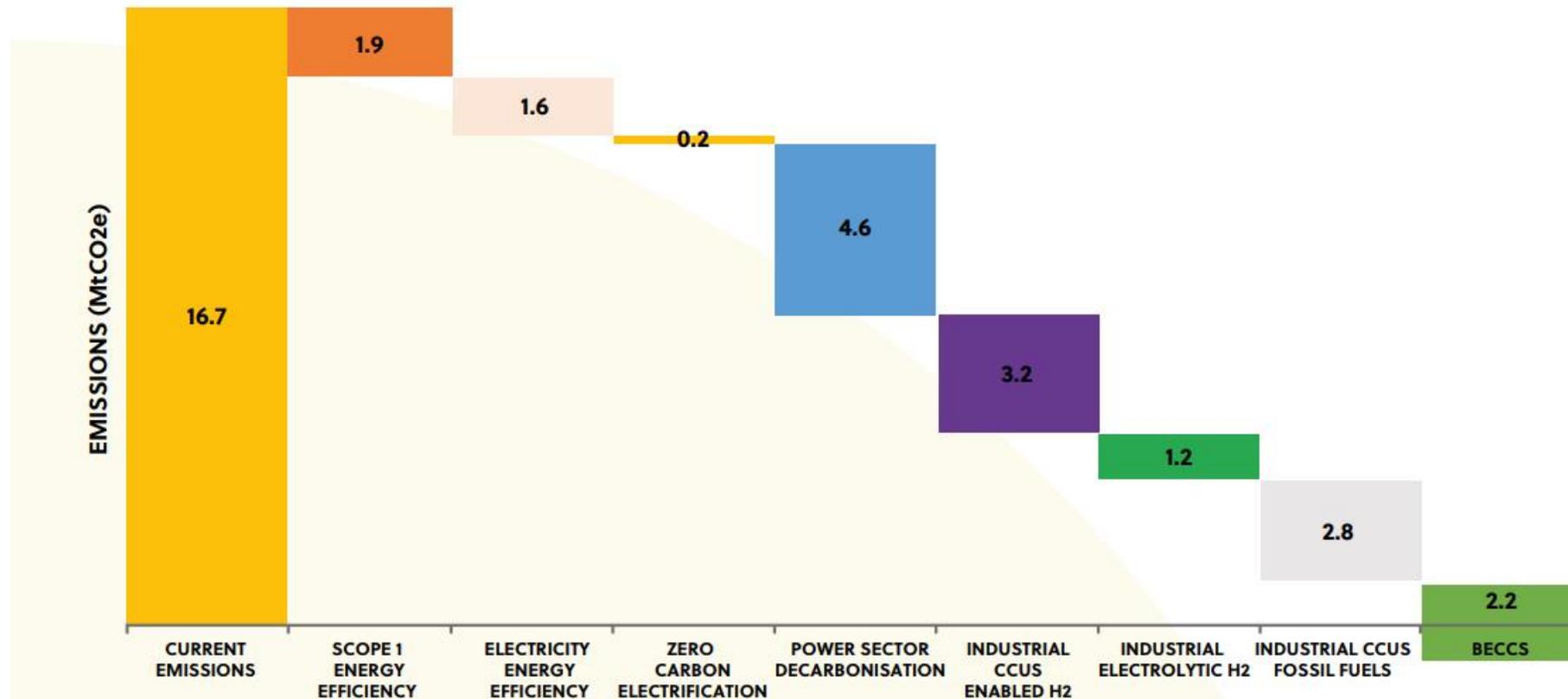
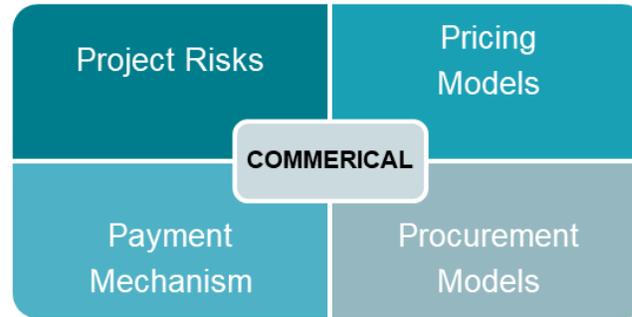
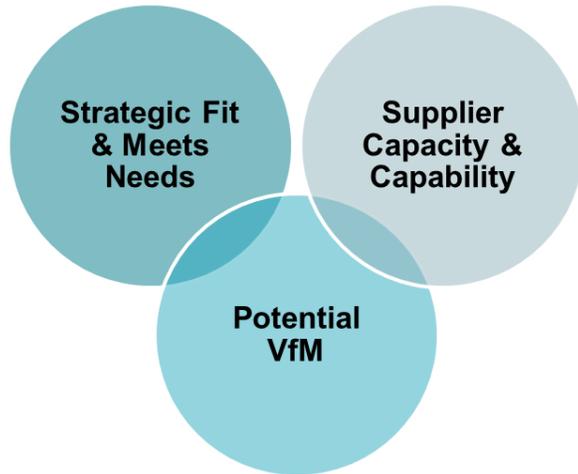
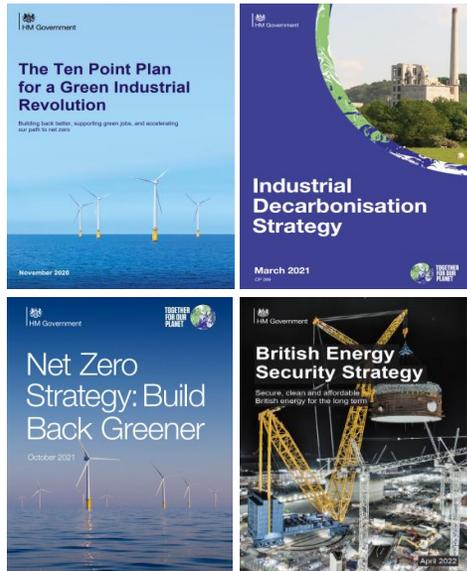


FIGURE 1: Higher Hydrogen Scenario

# Investment Case



- The scale of the solution
- How much CAPEX is required to achieve net zero
- Where it best spent to gain value for money
- The value added to the region.



Strategic Case

Economic Case

Financial Case

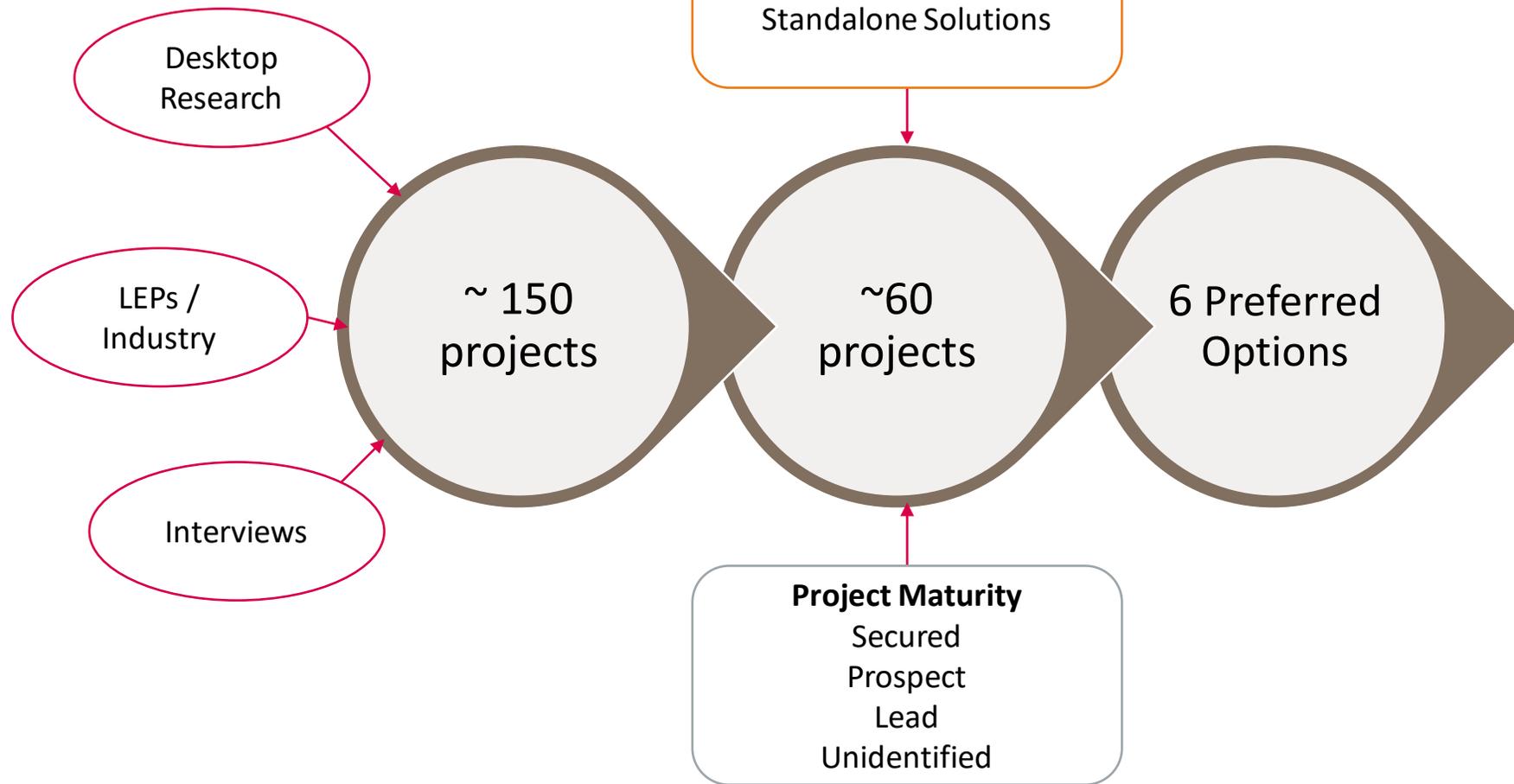
Commercial Case

Mgmt Case

# Understanding the Pipeline

**Linkage to Ecosystem**  
System-Based  
Linked Strategies  
Standalone Solutions

**Project Maturity**  
Secured  
Prospect  
Lead  
Unidentified



'Six Preferred Options'
Option 1: Do nothing
Option 2: De minimis decarbonisation pathway
Option 3: Maximised industrial CCUS-enabled & nuclear electrolytic H2 Net Zero pathway
<b>Option 4: Mixed Net Zero pathway</b>
Option 5: Maximised industrial CCUS-enabled H2 Net Zero pathway
Option 6: Maximised industrial electrolytic H2 Net Zero pathway

## Preferred Option – Mixed Net Zero Pathway

		Option 2 – De minimis decarbonisation pathway	Option 3 - Maximised industrial CCUS-enabled & nuclear electrolytic H2 NZ pathway	Option 4 – Mixed Net Zero pathway
Economics (in £ billions)	CAPEX	£6.7	£32.4	£34.0
	OPEX / 30 yrs	£4.7	£22.6	£24.5
	TOTAL	£11.5	£55.0	£58.5
Financial (in £ billions)	CAPEX	£5.0	£26	<b>£29.6</b>
	OPEX / 30 yrs	£5.9	£33.1	£35.8
	TOTAL	£10.9	£35.8	£65.5
Additional CO2 reductions Including do nothing MtCO2 p.a., all (industrial only)		23.5 (8.4)	45.0 (16.7)	<b>46.5</b> (17.1)
Additional CO2 reductions, over and above do nothing, MtCO2 p.a., all (industrial only)		5.5 (3.3)	27.0 (11.6)	28.5 (12.0)
In £ Billion	Cost (CAPEX & OPEX)	£11.5	£55.0	£58.5
	Benefit (GHG reduction)	£33.7	£157.6	£167.0
	Net benefit	£22.2	£102.6	<b>£108.5</b>
<b>Initial Benefit Cost Ratio (BCR)</b>		<b>1.9</b>	<b>1.9</b>	<b>1.9</b>

# Key Challenges

Planning Process

System-Wide Thinking & Enabling Infrastructure

Project Scale for Funding & Financing

Supply Chains

Workforce & Skills

Inward Investment

## What Next?

- “Investment Readiness” tool developed to allow appraisal of projects by sector and individually in preparation for securing investment.
- Work underway to compare NZNW outputs with other industrial clusters globally in Germany, Holland and the US
- Funding secured for a study on next steps for the cluster plan investment case
- Funding secured for an industrial decarbonisation coordination role for the North West – with potential to be matched by industry
- Targeted campaign of engagement with DESNZ
- Establishment of a regional public communications group to ensure “industry speak” can be translated into what this means for everyone living and working in the North West

# Thanks for listening!

