



Electrification

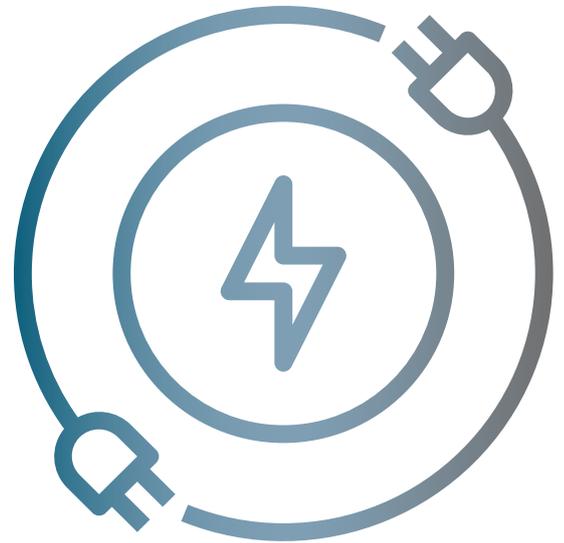
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This AMP Clean Energy briefing paper outlines the policy landscape on industrial decarbonisation and focuses on hydrogen infrastructure development, reporting & monitoring, energy efficiency and emissions reduction measures. The paper provides key background information, a summary of overarching themes and upcoming policies that businesses need to be aware of to help shape their Net Zero strategy.

AMP Clean Energy is a distributed energy business focussed on net zero solutions to decarbonise heat and grid solutions which enable the growth of renewables. We provide businesses with fully funded low carbon solutions and typically invest between £100k to £25million per project. With 160 projects in our portfolio, we have been helping organisations to become more sustainable over the past 10 years.

<https://www.ampcleanenergy.com/net-zero-funding>

Introduction

Electrification is considered crucial on the path to net zero.

The [Net Zero Strategy](#) sets out the Government's intended steps to increase electrification in industry, and the [Industrial Decarbonisation Strategy](#) includes a government commitment to ensure uptake of industrial fuel switching in line with net zero. These strategies are supported by the [UK Emissions Trading Scheme \(ETS\)](#) which promotes low carbon investments, such as electrification, through long-term carbon price signals.

Applications of electrification – or the practice of powering a process by electricity, often switching from a carbon-intensive power source – are expansive. It is expected that a minimum of 20 TWh per year of fossil fuels in industry will be replaced by low carbon alternatives in 2030, including hydrogen, electrification, and bioenergy. However, there are no specific targets or business models currently in place for electrification in the UK.

The main avenues of financial support have been the [Industrial Energy Transformation Fund \(IETF\)](#) which provides grant funding for the upfront costs of onsite industrial equipment, and the [Industrial Fuel Switching Competition \(IFSC\)](#), which offers funding for projects to test industrial electrification technology. There will be three rounds of the IETF in 2022 and the IFSC Phase 2 will open later this year.

“Low-regret fuel switching to electrification” is a key element of the UK’s industrial decarbonisation plans during the 2020s. *

“ *Electrification is considered a critical element of net zero, but we are currently lacking targets and business models necessary to drive increased uptake in industry.*

Stuart Reid

* <https://www.gov.uk/government/publications/industrial-decarbonisation-strategy>

The Policy Landscape

Electrification, hydrogen, and carbon capture usage and storage (CCUS) are the key areas of focus for decarbonising industrial fuel. Hydrogen and CCUS are generally preferred for high temperature processes and industrial clusters, whereas electrification is favoured for lower-temperature processes and dispersed sites. Industrial decarbonisation policies indicate that energy efficiency measures are a priority, followed by electrification (often discussed in opposition to hydrogen). The UK and Scottish Governments remain open to the possibility that electrification or other solutions may become preferable over hydrogen.

The Government aims to address barriers to electrification, while simultaneously supporting companies to make greener choices. The upcoming 'Fairness and Affordability' consultation is the first step in the process of rebalancing prices between electricity and gas, with a stated intention to equalise levies on electricity and gas bills by 2025. However, due to the ongoing energy security crisis, this consultation has been delayed.

As such, while there has been vague governmental support for the possibilities available through electrification, there are currently limited concrete plans to increase uptake in industry. The Climate Change Committee (CCC) has recommended that an electrification business model should be created this year, but government has not committed to creating one.

In the absence of business models and targets, uptake of electrification is likely to be driven by outside factors, such as the UK ETS and increasing price of gas. From 2024-2026, the UK ETS will be aligned with plans for net zero and the scope of companies encompassed by this scheme will broaden. This will expose businesses to stronger carbon costs and widen the pool of businesses covered by carbon pricing, which will penalise the use of gas and potentially incentivise electrification.

“

The rising cost of gas and pressure for energy security are likely to make electrification increasingly appealing and financially viable.

Stuart Reid

How could this impact your business?

Upcoming policies and building regulations will place increasing pressure on businesses to reduce emissions and increase energy efficiency, likely through hydrogen-ready and/or electrification practices.

Key points of consideration include:

1. Companies should consider their abilities to adapt to hydrogen and/or electrification, as well as determining which methods will be most applicable to their manufacturing and industrial processes.
2. The lack of clarity on business models and plans for electrification may present a risk to some business models (in particular, processes where hydrogen is not applicable). Companies who fall into this category may want to engage with government to address barriers to electrification. Forward-thinking planning can provide opportunities through funding, discounts, and reputational benefits of being ahead of the curve. Alternately, delayed action may lead to challenges such as rapid implementation of new measures, reputational risk, and potential financial disadvantage.
3. Companies should consider the grants which are currently open and whether there are any opportunities available for implementing electrification infrastructure.
4. Companies should take a long-term view regarding their decarbonisation plans; as the UK moves towards a decarbonised energy system, there may be increasing opportunities through electrification as it becomes more financially viable.

Summary

While there may not be significant support from government at this time, outside factors are making electrification an increasingly viable alternative in decarbonisation plans. This is particularly true for processes where hydrogen and/or CCUS are not applicable. Companies should continue to monitor developments in regulation and innovation to identify possible opportunities.

Future Policy Timelines

Note: this list is not exhaustive, but rather a representation of key items which have been identified through ongoing monitoring and forecasting work.

Year	Targets, policies, and consultations
2022	<p>Starting this year:</p> <ul style="list-style-type: none">• Initial steps (i.e., industry engagement) to support uptake of electrification in industry (UK Gov – BEIS, ongoing in 2022)• Pilot scheme for performance-based policy framework in large commercial and industrial buildings (UK) <p>Closing this year:</p> <ul style="list-style-type: none">• Climate Change Agreement (CCA), based on existing eligibility rules, closed to new entrants on 31 March 2022 (UK) <p>Consultations (awaiting response, live, and upcoming):</p> <ul style="list-style-type: none">• Live consultation: <u>'Developing the UK Emissions Trading Scheme (UK ETS)'</u> (UK Gov, closing 17 June 2022). Includes proposals for:<ul style="list-style-type: none">• Aligning UK ETS cap with net zero• Review of free allocation• Expanding UK ETS coverage, both within covered sectors and to include new sectors• Consultation response: <u>'Climate Change Agreements (CCAs): proposals for a future scheme'</u> (UK), including proposals for amendments such as:<ul style="list-style-type: none">• Mandatory compliance with a recognized energy management scheme• Mandatory disclosure of action taken, action planned, and annual financial benefits• Maintaining the buy-out mechanism (price not set at this stage)• Using both energy intensity and trade intensity metrics as eligibility criteria• All facilities to be re-tested against finalised eligibility criteria.• Expected consultation: Fairness and Affordability Call for Evidence, aiming to rebalance electricity and gas prices and to support green choices, with a view to taking decisions in 2022 (UK Gov, not yet published)• Expected consultation: Consultation on full scheme - Climate Change Agreements (CCA) (UK Gov, not yet published)

Year	Targets, policies, and consultations
2025	<ul style="list-style-type: none"> • Tax between electricity and gas equalised (UK)
2030	<ul style="list-style-type: none"> • 43 - 53% reduction in industrial emissions, compared to 2019 levels (UK Gov)
2035	<ul style="list-style-type: none"> • 50TWh per year of fossil fuels in industry replaced by low carbon alternatives (UK Gov) • 63-76% reduction in industrial emissions, compared to 2019 levels (UK Gov)
2050	<ul style="list-style-type: none"> • 87-96% reduction in industrial emissions, compared to 2019 levels (UK Gov)

To find out how AMP Clean Energy can support your business with your Net Zero strategy, contact Stuart Reid, Head of Net Zero Customer Solutions on **07833 231085** or **stuart.reid@ampcleanenergy.com**

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