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Debate Pack

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Energy intensive industries

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1 Summary

A Westminster Hall debate on Energy intensive industries is due to take place on Wednesday 24 November 2021. The debate will be led by Jack Brereton MP.

Energy intensive industries refer to industrial sectors - usually manufacturing industries – that are high users of energy. For these industries energy costs are often a high proportion of their production costs. These sectors are diverse in their energy consumption in terms of energy sources (electricity, gas or other fuels) and volumes used.

Historically, electricity prices for energy intensive industries have been higher in the UK compared to comparable European countries. Industry bodies argue that higher electricity costs in the UK put domestic manufacturers at a competitive disadvantage in global markets. While industrial electricity prices in the UK have been high relative to Europe historically, gas prices have been comparably lower.

The current rise in energy prices in 2021 been driven by rising gas prices, but electricity prices have also followed because gas is one of the fuels used to generate electricity. Background and further explanation of recent energy price rises is covered in the Library briefing, Energy price crunch 2021.

Electricity prices also present a challenge for energy intensive industries to decarbonise. For many industries decarbonisation options often require switching from gas to electricity and a consequential increase in electricity consumption. With electricity prices high, many manufacturers argue it is not currently economically viable to switch to electrification.

This briefing pack provides background information on industrial energy prices. It includes information on Government support for the sector on electricity costs and decarbonisation.

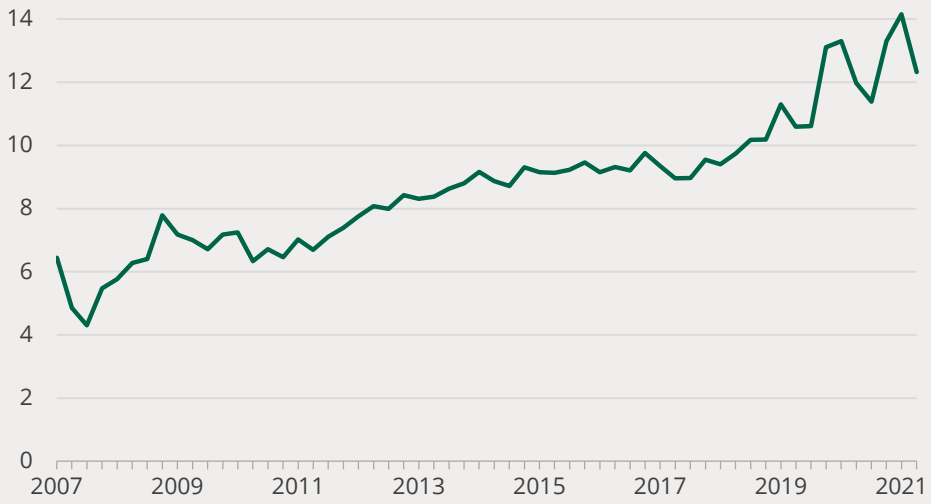
2 Industrial energy prices

2.1 Electricity prices

The graph below shows the UK trend for electricity prices for extra-large industrial consumers.

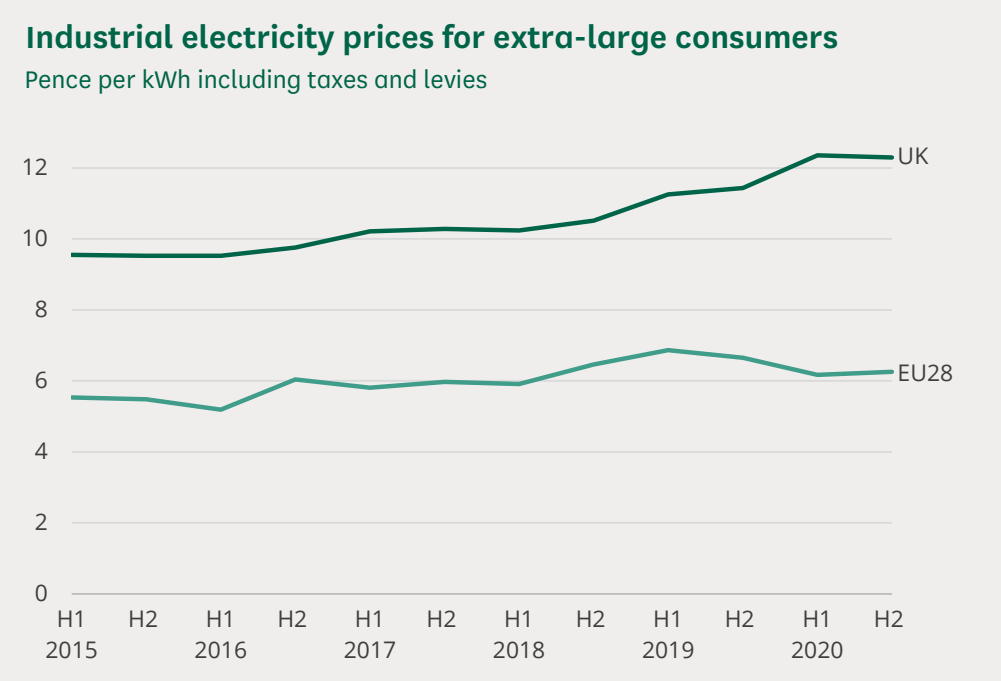
Average UK electricity prices for extra-large industrial consumers

Pence per kWh in cash prices, including the Climate Change Levy



Source: Gas and electricity prices in the non-domestic sector, BEIS

UK Electricity prices for extra-large industrial consumers in the second half of 2020 were higher than for any EU member state. They were 12.4 pence per kWh which was double the median price in the EU. Only Cyprus has had higher prices (at times) since 2015. Trends in UK and EU median values are illustrated below.



Source: International industrial energy prices, BEIS

A 2018 report by academics at University College London (UCL) highlights that this data does not include any post-payment compensation schemes, but does include exemptions:

> Although any discounts or exemptions applicable to industrial consumers in advance of payment for electricity are reflected in Eurostat data, any mechanism that provides "ex-post" compensation (i.e. after a user has paid for electricity) for the cost of electricity price components (or elements thereof) are not included in the Eurostat data.[1]

2.2 Background to UK industry electricity prices

There are various reasons why electricity prices are higher in the UK for energy intensive industries. The causes of the higher prices are debated, and often not clear. A 2017 report by the UK's Climate Change Committee (who advise the Government on decarbonisation) titled Energy prices and bills – impacts of meeting carbon budgets assessed the issue and argued:

> Differences in low carbon policies cannot explain the difference in electricity prices, which stem primarily from higher wholesale and

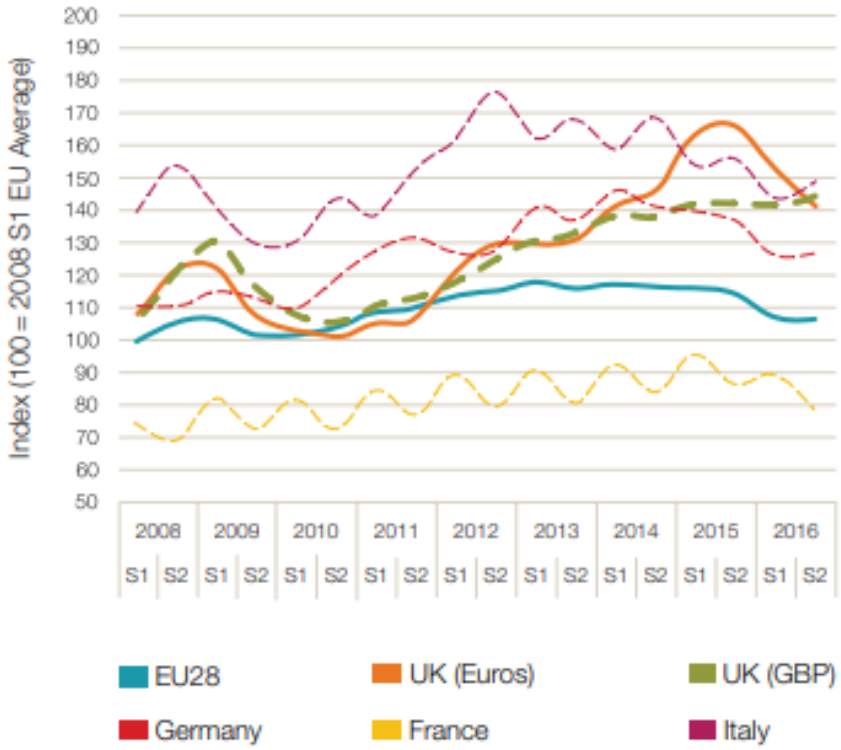
[1] UK Industrial Electricity Prices: Competitiveness in a low carbon world, Professor Michael Grubb and Paul Drummond, UCL, February 2018.

network costs. It is not clear why these costs are higher in the UK than in many comparable countries.[2]

For detailed discussion, see section 3 of the Committee's report titled "Maintaining UK competitiveness in a low-carbon economy" (from page 88).[3]

The issue was also investigated in a 2018 report by academics at UCL on UK Industrial electricity prices.[4] The report included the following graph of varying electricity prices from 2008 to 2016:

Figure 2 – Industrial electricity price evolution (index) 2008–2016, UK compared to EU average & key countries



The report made the following conclusion on why electricity prices were higher over that timeframe:

> Differences in industrial electricity prices have been driven in particular by the fact that some of our key continental neighbours tend to be better interconnected and engage in more cross-border electricity trading, are

[2] Committee on Climate Change, Energy prices and Bills – impact of meeting carbon budgets, March 2017.

[3] Committee on Climate Change, Energy prices and Bills – impact of meeting carbon budgets, March 2017

[4] UK Industrial Electricity Prices: Competitiveness in a low carbon world, Professor Michael Grubb and Paul Drummond, UCL, February 2018.

more supportive of long term contracts to reduce prices for electro-intensive companies, take a more activist approach to how network and policy costs are charged to electro intensive companies, and have integrated renewable energy on their system in a more co-ordinated – and therefore cost-effective – way than in the UK (although UK policy is now improving in this regard).[5]

In July 2021, Ofgem, the economic regulator for the energy sector, published a research report looking into electricity prices for Energy Intensive Industries in comparison to European countries (primarily France, Germany and the Netherlands). The research, led by the Office for Research and Economics (ORE), concluded that there appeared to be three main drivers of higher industrial electricity prices in Great Britain compared to these European countries:

- higher wholesale electricity prices, due to a combination of comparatively low levels of interconnection, an electricity generation mix that relies on natural gas and the Carbon Price Support which increases the prices of electricity generated using fossil fuels;
- policy costs in Great Britain appear higher, even after policy reductions (compensation and exemptions) are accounted for; and
- network costs in Great Britain appear higher because comparator countries offer discounts on network costs for certain energy intensive industries.[6]

The report also highlighted the diverse nature of EIIs in Great Britain and that electricity consumption varies across each and they each face different challenges.[7]

2.3 Gas prices

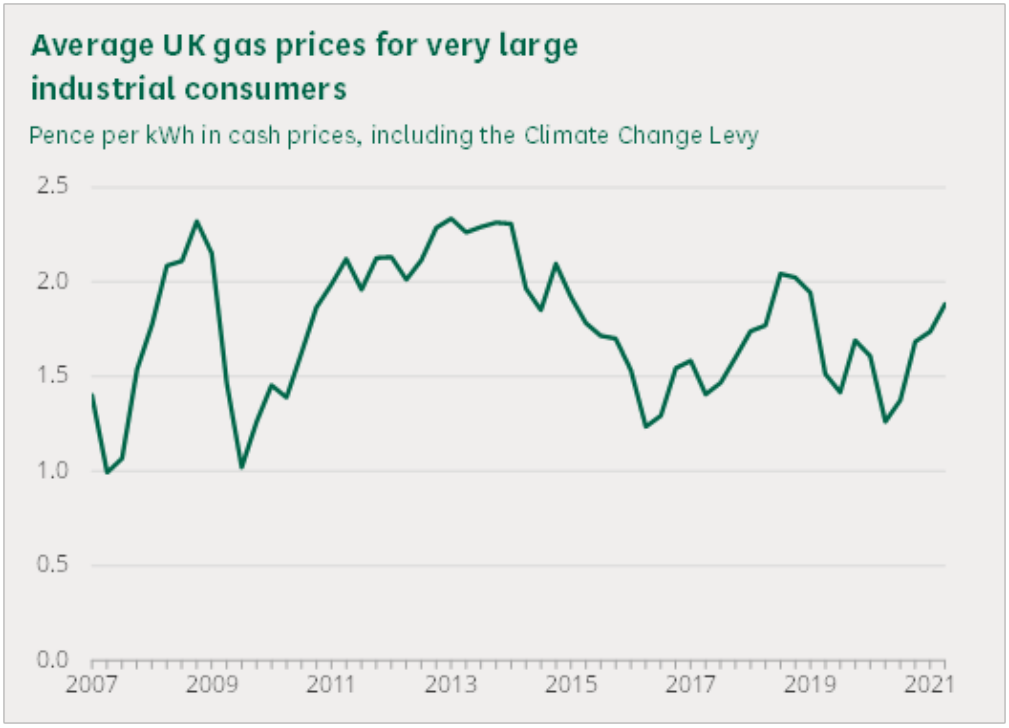
While UK electricity prices are higher for large industrial users compared to European countries, gas prices historically have been lower.

The chart below shows trends in UK gas prices for large industrial consumers.

5 UK Industrial Electricity Prices: Competitiveness in a low carbon world, Professor Michael Grubb and Paul Drummond, UCL, February 2018.

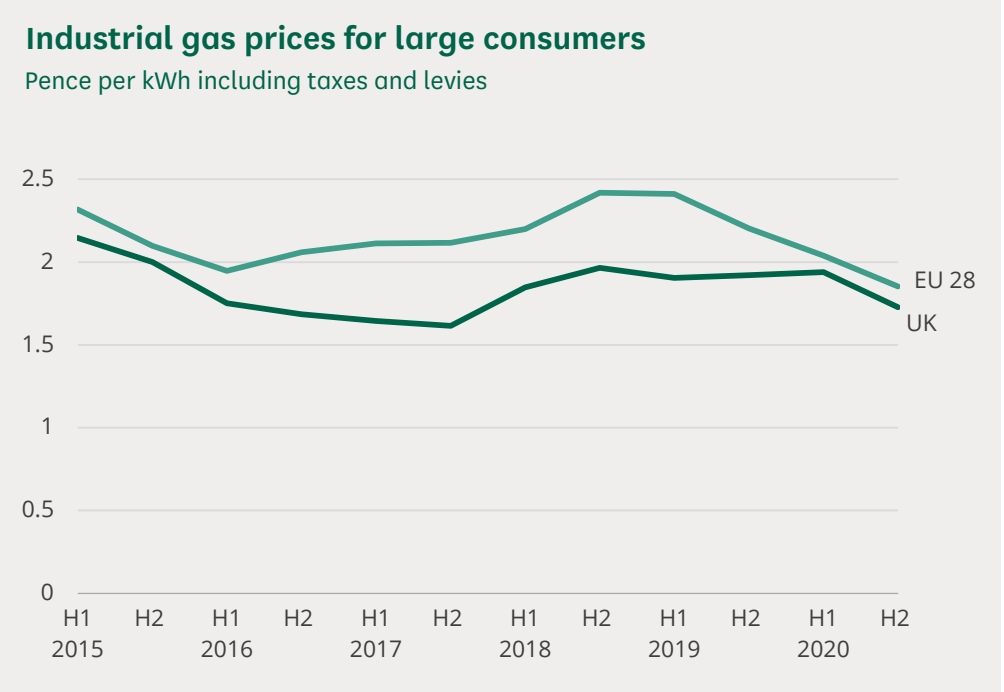
6 Ofgem, Research into GB electricity prices for Energy Intensive Industries, 9 July 2021

7 Ofgem, Research into GB electricity prices for Energy Intensive Industries, 9 July 2021



Source: Gas and electricity prices in the non-domestic sector, BEIS

UK gas prices for large industrial consumers in the second half of 2020 of 1.73 pence per kWh were 7% below the EU median and 8th lowest out of the 28 countries. Gas prices for these consumers have been below the EU median for many years, but the gap has fallen in the past two years. In the second half of 2017 the UK had the lowest price in the EU for these consumers at 24% below the median value. Trends in UK and EU median values are illustrated below.



Source: International industrial energy prices, BEIS

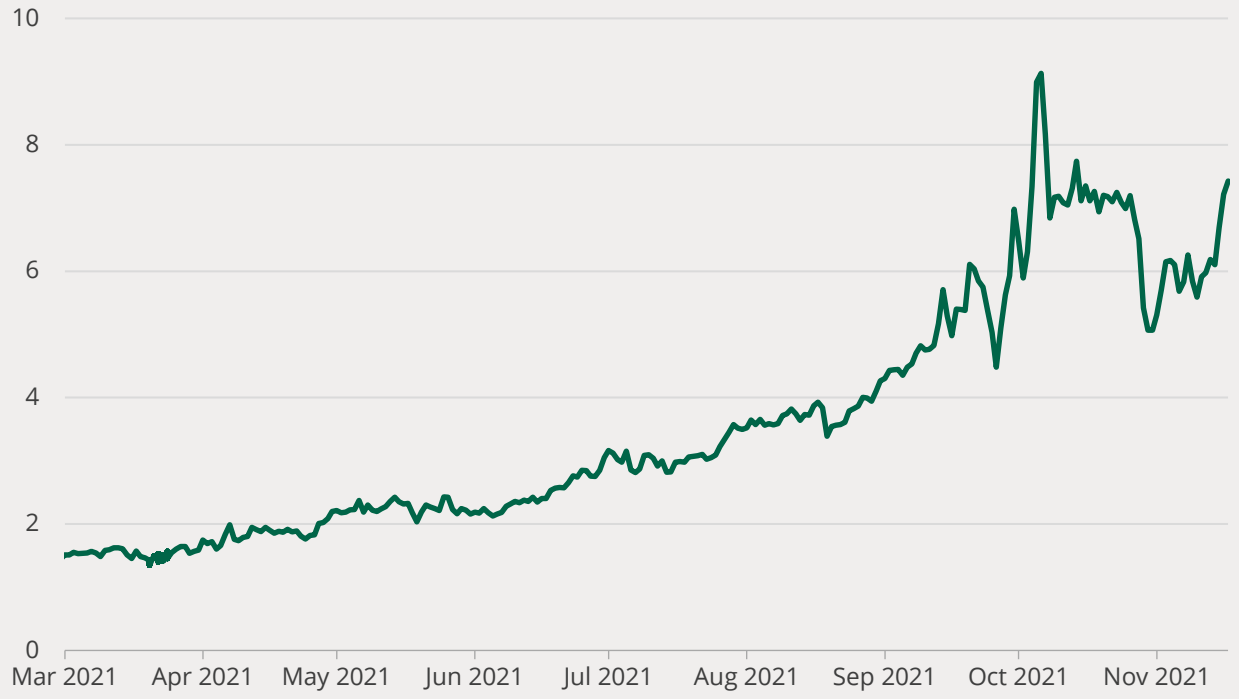
2.4 Energy price rises in 2021

Rising energy prices in late 2021 has been driven by rising gas prices, but electricity prices have also followed as gas is one of the fuels used to generate electricity. The background to recent energy price rises is covered in our briefing: Energy price crunch 2021.

The chart below illustrates the increase in wholesale gas prices on the daily spot market. They went from around 2 pence per kWh in the first half of the year to a peak of 9.1 pence per kWh in early October. They have subsequently fallen from this peak, but have remained well above early 2021 levels. While consumers do not pay daily spot prices, which are particularly volatile, the price trends reflect underlying pressures on prices which, if maintained, will be fed through to the prices all consumers pay for gas and electricity.

Wholesale gas prices increased steadily from spring, rapidly from late summer

Daily spot price. Pence per KWh



Source: Prevailing view tool, nationalgrid.com

Support for industrial energy costs in response to recent price increases

Energy intensive industry bodies have raised concern about rising energy prices in late 2021.

Some industries are susceptible to rising gas prices due to using gas as a heat source for furnaces or as a raw material input. For example, ceramics and glass manufacturers use gas to heat high-temperature furnaces.[8] Fertiliser production uses natural gas a raw material and as a heat source.[9]

In mid-September, fertiliser company CF Fertilisers ceased production at its UK sites due to high gas costs.[10] On 21 September, the Government announced it would temporarily provide financial support towards some of the operating costs the company, to allow immediate restart of its Billingham plant.[11] Stopping production at the plant threatened carbon dioxide supply (a by-product of fertiliser production) to UK businesses, an important input to food supply chains.[12]

For other industries it is consequential rising electricity prices that are concerning, particularly given historically higher UK prices. For example, the steel industry warned in mid-September that some manufacturers have been pausing production due to high electricity costs making it unprofitable to make steel at certain times of day.[13]

Energy intensive manufacturing industries have been calling for Government action on electricity costs for many years to help make UK manufacturing more competitive in global markets.[14] The Government has introduced a number of measures to support EIIs meet the costs of decarbonising electricity, set out in Box 1.

8 Gas price surge pushes Europe's ceramics industry to breaking point, Reuters, 27 October 2021. British Ceramics Federation, Ceramics sector calls for support to meet challenge of net zero, 10 September 2021.

9 Fertilisers Europe, How are fertilisers made? Accessed 22 November 2021.

10 CF Fertilisers, CF Industries Holdings, Inc. announces halt of operations at UK facilities, 15 September 2021.

11 BEIS, Defra, Government secures agreement to ensure CO2 supplies, 21 September 2021. Following this temporary arrangement, the CO_2 industry came to an agreement to ensure sustainable supply of CO_2 to UK businesses while global gas prices remain high.

12 Why does a carbon dioxide shortage matter so much to the UK economy?, The Guardian, 21 September 2021.

13 UK Steel, Recent power price spikes, 15 September 2021.

14 UK Steel; UK Steel Electricity Price Report, February 2021; Energy intensive users group, EIUG Long Term Strategy, 4 September 2012.

1 Existing support for industrial electricity costs

The main support measure for energy intensive industries' electricity costs is a series of exemptions and compensation. These cover several policies where the Government provides compensation or exemptions to energy intensive industrial users for the indirect costs (higher electricity prices) associated with these policies. The policies include the climate change levy, contracts for difference mechanism, renewables obligation, and feed in tariffs. These levies are still paid by domestic consumers.

Further information is available at the following links:

- Guidance on exemption from the indirect costs of funding Contracts for Difference, the renewables obligation and small scale feed-in tariffs (December 2020). Eligible sectors are set out on page 5 of the guidance.
- Guidance on compensation for the indirect costs of the UK ETS and the CPS mechanism (May 2021). The guidance includes a list of eligible sectors. In June 2021 the Government launched a review of these schemes to compensate industries for indirect emission costs in electricity prices. A summary of responses was published on 17 November 2021 but a full Government response has not yet been published.[15]

The Government has also provided various support schemes to support industry decarbonisation, including investments in energy efficiency projects and technologies (see section 3 below).

The Energy Intensive Users Group, comprising industry representatives from industries such as steel, chemicals, ceramics, glass and others have called for 'immediate' steps this winter to protect critical industries from outages caused by supply interruptions or high costs. These included calls for 'cost containment' measures on energy prices, calls for Ofgem (the regulator) to introduce network tariff discounts which they say are offered in competitor industries in the EU, and changes to emergency gas supply procedures.[16]

Manufacturing industry representatives have met with Business Secretary Kwasi Kwarteng about high energy prices and in early October welcomed 'positive first steps' to find 'practical solutions' for the sector.[17]

15 BEIS, Review of the schemes to compensate energy intensive industries for indirect emission costs in electricity prices, 17 November 2021.

16 Energy Intensive Users Group, Energy Prices: Government and Ofgem must act urgently, 5 October 2021.

17 Energy Intensive Users Group, Energy Prices: UK Energy Intensive Industries meet with the Secretary of State, 8 October 2021.

The Government published a statement on discussions with energy intensive industries on gas prices on 8 October 2021. This stated:

> The Business Secretary stressed that the government remained confident in the security of gas supply this winter. He also highlighted the £2 billion package of support that has been made available to industry since 2013 to help reduce electricity costs.
>
> The Business Secretary noted he was determined to secure a competitive future for our energy intensive industries, and promised to continue to work closely with companies over the coming days to further understand and help mitigate the impacts of any cost increases faced by businesses.[18]

According to press reports, the Business Secretary submitted a request to Treasury regarding support for the sector. A report in the Financial Times on 11 October suggested emergency loans were the most likely form of support to be offered.[19]

The Energy Intensive Users Group said on 19 October that cost deferment support only would not be sufficient. It stressed its members were "not looking for a 'bail out' rather a change to the operating conditions".[20] In an article in the Guardian on 12 October, Gareth Stace (UK Steel's director) said that a "sticking plaster" of support, such as a loan, wouldn't help the long-term problems of higher UK electricity prices relative to Europe.[21]

On 27 October industry representatives said they were "deeply disappointed" that no new support from the Government had been provided.[22]

3 Other support for energy intensive industries

Electricity costs are only one aspect of calls from industry to make UK manufacturing more competitive. The Library briefing paper on UK Steel industry: statistics and policy (June 2021) provides background information in the context of the steel industry, including trade remedies, procurement and state aid policy.

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18 BEIS, Statement on roundtable between the Business Secretary and energy intensive industry representatives, 8 October 2021.

19 Sunak considers rescue plan for UK sectors hit by energy crisis, Financial Times, 11 October 2021.

20 Energy Intensive Users Group, Energy Prices: UK Energy Intensive Industries raise concerns over reports of cost deferment proposal, 19 October 2021

21 Steel industry calls for state support to avoid 'full blown crisis', The Guardian, 12 October 2021.

22 Energy Intensive Users Group, Energy Prices: No action from Government to contain escalating energy costs for Energy Intensive Industries 27 October 2021; UK industry hits out at government silence on helping big energy users, Financial Times, 3 November 2021.

A report for the Committee on Climate Change in 2017 titled Competitiveness impacts of carbon policies on UK energy-intensive industrial sectors to 2030 reported various reasons for declines in the aluminium, cement and steel sectors since the late 1990s, including weak market conditions, a strong pound, which undermined exports and facilitated increased competition from imports, and consequential low investment.[23]

Trade bodies from the automotive, aerospace, chemicals, pharmaceuticals and food & drink manufacturing sectors have called on the Government to invest in advanced manufacturing clusters, including scaling up funding for decarbonisation and incentivising research & development investment.[24]

3.1 Carbon Border Adjustment Mechanism

There are also ongoing discussions withing Government about the possibility of a carbon border adjustment mechanism (CBAM) that would apply a charge on imports aimed at addressing carbon leakage. Carbon leakage is the potential loss of competitiveness and transfer of operations from countries with high costs of carbon for businesses to countries with less stringent emissions targets, and therefore lower carbon costs to businesses. This is something that EIIs are particularly vulnerable to.

EIIs have called for a CBAM as a way to ensure competitiveness against imports. However, the October 2021 Treasury Net Zero Review was critical of CBAMs. It raised concerns about the complexity of border measures, potential inconsistencies in measuring carbon emissions and a lack of clarity about the effects on consumers and businesses

This debate is within the context of the EU's decision to introduce a CBAM from 2023 which will initially apply to imports of imports of cement, iron and steel, aluminium, fertilisers and electricity. As currently proposed, charges will be applied based on EU Emissions Trading Scheme (ETS) prices, although some third countries will be exempt if they participate in the EU ETS or have an emission trading system linked to the EU's.

The UK has left the EU ETS and instead has implemented a UK ETS which broadly mirrors the EU scheme. The schemes are not linked although the possibility of this happening in the future was included in the UK-EU Trade and Cooperation Agreement and is something industry supports.

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23 Committee on Climate Change, Competitiveness impacts of carbon policies on UK energy-intensive industrial sectors to 2030, March 2017.

24 he Association of the British Pharmaceutical Industry (ABPI), ADS, the Chemical Industries Association (CIA), the Food and Drink Federation (FDF) and the Society of Motor Manufacturers and Traders (SMMT), UK manufacturing holds key to unlocking Government's domestic and global ambitions, 20 October 2021.

Further background on the scheme in the UK can be found in the Commons Briefing on the UK ETS

4 Industrial decarbonisation

4.1 Industrial decarbonisation strategy

Decarbonisation of heavy industrial processes is central to reaching the Government's target to achieve net-zero greenhouse gas emissions in the UK by 2050. In March 2021 the Government published its Industrial Decarbonisation Strategy. The aim of the strategy is to:

> show how the UK can have a thriving industrial sector aligned with the net zero target, without pushing emissions and business abroad, and how government will act to support this.[25]

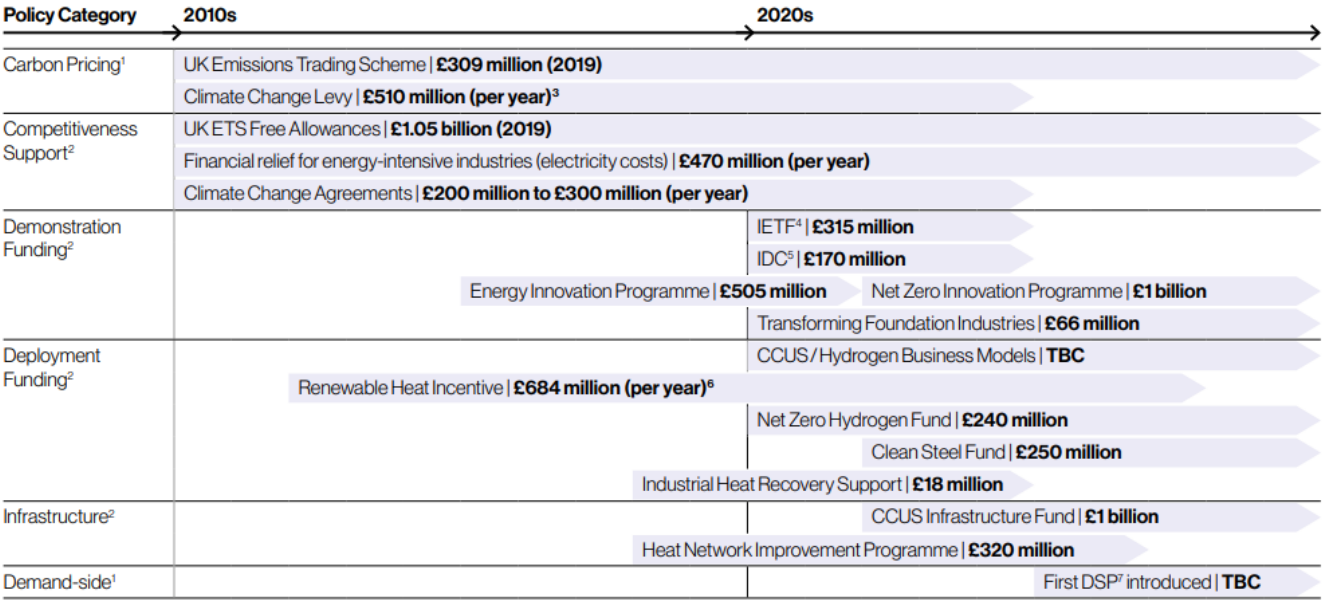
For many industries decarbonisation options currently require switching from gas to electricity and a consequential increase in electricity consumption. With electricity prices high, many manufacturers argue it is not currently economically viable to switch to electricity. For example, the ceramics industry currently relies on high-temperature gas-fired kilns.[26]

There are several Government funds supporting industrial decarbonisation. The following image from the Industrial Decarbonisation Strategy summarises policies announced as of March 2021. Further information on some of these funds is provided below.

Since the Industrial Decarbonisation Strategy the Government has also published its Hydrogen Strategy (see section 4.2) and Net Zero Strategy.

25 BEIS, Industrial decarbonisation strategy, 17 March 2021, Page 8 Executive Summary.

26 British Ceramics Federation, Ceramics sector calls for support to meet challenge of net zero, 10 September 2021.



Cost figures taken from most recent government publication or announcement unless stated otherwise.
1 Cost to industry
2 Cost to government
3 Estimated cost based on energy consumption. Total CCL cost is £2 billion per year across all sectors, including industry, agriculture, commercial and public services.
4 IETF = Industrial Energy Transformation Fund
5 IDC = Industrial Decarbonisation Challenge
6 Annual costs were £684 million in 2019-2020, including commercial, industrial and public premises. £1.01 billion total budget for domestic/non-domestic schemes in 2019/2020.
7 DSP = Demand-side policy (see Chapter 3)

Source: HM Government, Industrial Decarbonisation Strategy, March 2021, page 21.

The Commons Business Energy and Industrial Strategy Committee held an evidence session on 18 May looking at reactions to the Government's industrial decarbonisation strategy.[27]

Business leaders welcomed the industrial decarbonisation strategy as a positive step but commented that the strategy contained "limited new funding schemes to support the levels of policy ambition" and that the next steps in innovation funding support were not clear.[28]

The ceramics industry argues that much of Government funding to date has been directed towards industrial clusters, and that businesses not located in these sites (which many of its members are not) have not had sufficient funding support.[29]

27 BEIC Committee non inquiry session, Oral evidence: Industrial Decarbonisation –response to the Government Strategy, HC 164, 18 May 2021.

28 BEIC Committee non inquiry session, Oral evidence: Industrial Decarbonisation –response to the Government Strategy, HC 164, 18 May 2021, Q4, Aldersgate Group, Industrial Decarbonisation Strategy: Amplifying decarbonisation of the Industrial Sectors, 29 March 2021; Sustainability Exchange, Industrial Decarbonisation Strategy – Summary, 19 March 2021.

29 British Ceramics Federation, Ceramics sector calls for support to meet challenge of net zero, 10 September 2021; Aldersgate Group, We won't save the planet if the UK decarbonises by deindustrialising, 3 November 2021.

Industrial Energy Transformation Fund (IETF)

The Industrial Energy Transformation Fund (IETF) is designed to help businesses in manufacturing industries cut their energy bills and carbon emissions through investing in energy efficiency and low-carbon technologies. The fund was announced in the 2018 Budget with £315 million available up to 2024.

The funding is delivered in two phases. Phase 1 focused on energy efficiency projects and included switching to low-carbon fuels such as hydrogen. Phase 1 had two competition rounds. Winners of the first round were announced in May 2021.[30] The second round closed to applications in August 2021.

Phase 2 will focus on funding for large-scale demonstration and deployment of decarbonisation projects, with £220 million funding available. Phase 2 will have four competition windows running from September 2021 to January 2023.

A separate IETF fund operates in Scotland with funding to Scotland calculated by the Barnett formula.[31]

Clean Steel Fund

Clean Steel Fund: The Government opened a call for evidence in August 2019 on the establishment of a £250 million Clean Steel Fund to "provide a long-term signal of support to the steel sector and its decarbonisation efforts".

A summary of responses was published in December 2020. It stated that "several factors mean that it would help if funding started to be released only from 2023 onwards" including that the sector needed time to develop plans for decarbonisation and that technology options (such as CCUS and low-carbon hydrogen production) are not yet ready for implementation.

The Labour Party and trade unions have criticised the delay and lack of clarity regarding the funding.[32]

4.2 Hydrogen Strategy

Using hydrogen as a low-carbon fuel is a potential avenue for decarbonising certain industrial processes, for example as an alternative heat source to natural gas for industrial furnaces. A report on Investing in Hydrogen

30 BEIS, Industrial Energy Transformation Fund (IETF) Phase 1: Summer 2020 competition winners, 24 May 2021.

31 Scottish Government, Energy Efficiency: Scottish Industrial Energy Transformation Fund (SIETF), accessed 22 November 2021.

32 HC Deb 25 March 2021; Pressure grows to accelerate £250m green fund for UK steel industry, Jim Pickard and Sylvia Pfeifer, Financial Times, 30 March 2021.

published in November 2020 by Deloitte noted in order to support decarbonisation efforts hydrogen "needs investment and policy support to establish demand, increase the scale of deployment and reduce costs."[33]

Low-carbon hydrogen refers to hydrogen produced from methods that generate few or no greenhouse gas emissions. This could be through generating hydrogen from natural gas alongside carbon capture and storage, or generating hydrogen from water using electrolysis with renewable electricity sources. The Parliamentary Office of Science and Technology (POST) note, Low-carbon hydrogen supply, provides further information.

On 17 August 2021 the Government published the UK hydrogen strategy. This policy paper sets out:

- how the UK will rapidly and significantly scale up production and lay the foundations for a low carbon hydrogen economy by 2030
- how government will support innovation and stimulate investment in the 2020s to scale up low carbon hydrogen[34]

The policy paper contains details of how hydrogen can be used in industry as well as information on overcoming the challenges of switching to hydrogen as an industrial fuel:

> Low carbon hydrogen can also provide an alternative to natural gas and other high carbon fuels currently used for industrial heating. This includes both indirect heating applications, for example, using hydrogen to fuel steam boilers and combined heat and power (CHP) systems, and direct heating processes, such as melting glass in a furnace. Low carbon hydrogen is a good option for processes that are more expensive or harder to electrify, given its potential to replace natural gas.[35]

On overcoming the barriers to using hydrogen as a low carbon alternative fuel, the paper states that:

> We recognise that industry faces several barriers in fuel switching to low carbon hydrogen, even where it may offer the best decarbonisation option. These include the higher cost of low carbon hydrogen supply compared with fossil fuels; the capital cost of retrofitting or replacing equipment to be hydrogen-ready; the operational disruption of conversion and the subsequent costs associated with optimising new processes using hydrogen; and the operational risks associated with the security of supply of low carbon hydrogen, particularly in the short term while the market develops.

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33 Deloitte, Investing in hydrogen: Ready, set, net zero, 2020.

34 BEIS, Policy paper: UK hydrogen strategy, 17 August 2021

35 BEIS, UK Hydrogen Strategy, 17 August 2021. p53

> Demonstrating the technical performance of hydrogen, without compromising process efficiency or product quality, is also essential. As hydrogen has a distinct chemical composition and physical characteristics compared to current fuels, further research and testing will be needed in the 2020s. [36]

As part of the Government's research into hydrogen, BEIS ran a consultation on a business model for low carbon hydrogen which ran from 17 August 2021 to 25 October 2021. This set out the Government's proposed business model aimed at supporting the deployment of low carbon hydrogen projects and sought stakeholder views on its design.

Funding for hydrogen production is also highlighted in the Net Zero Strategy with the Government outlining information on the Industrial Decarbonisation and Hydrogen Revenue Support (IDHRS) scheme:

> We have set up the Industrial Decarbonisation and Hydrogen Revenue Support (IDHRS) scheme to fund our new hydrogen and industrial carbon capture business models. We will be providing up to £140 million to establish the scheme, including up to £100 million to award contracts of up to 250MW of electrolytic hydrogen production capacity in 2023 with further allocation in 2024.[37]

4.3 R&D support for decarbonisation

Government funding sources for research and development aimed at decarbonisation in industry include:

- the Industrial Fuel Switching Competition, which funded pre-commercial low-carbon fuels and fuel switch enabling technology for industrial sectors.
- the Industrial Decarbonisation Challenge Fund was established as part of the Government's 2017 Industrial Strategy.[38] It provides funding for developing technologies such as carbon capture and storage and hydrogen fuel switching to be deployed across six industrial clusters.
- In July 2021, UK Research and Innovation (UKRI) announced that several industries would benefit from a share of the government's £127 million Strength in Places Fund (SIPF). The Fund is aimed at projects that demonstrate an impact on local economic growth, but several involve adopting energy efficiency or low-carbon technologies for example in the ceramics and dairy industries.

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36 BEIS, UK Hydrogen Strategy, 17 August 2021. p54

37 BEIS, Net Zero Strategy: Build Back Greener, 19 October 2021

38 BEIS, Industrial Strategy: building a Britain fit for the future, 27 November 2017. Note that the Industrial Strategy has now been replaced by the Plan for Growth (3 March 2021).

5 Parliamentary material

5.1 Written Questions

Iron and Steel: Carbon Emissions Question for Department for Business, Energy and Industrial Strategy, UIN HL3850

Asked by Lord Taylor of Warwick on 8 November 2021

To ask Her Majesty's Government what plans they have to introduce a steel sector deal (1) to help UK producers compete internationally, and (2) to provide long-term, sustainable policy support for the steel industry to transition to a low-carbon future.

Answered by Lord Callanan on 18 November 2021

The Government recognises the vital role that the steel sector plays in our economy and across all areas of the UK. We are keen to secure a competitive and viable future for the sector and have already provided it with extensive support, including more than £600 million to help with the high cost of electricity.

In order to help UK steel producers to compete internationally, the Government is providing funding for a programme of research and innovation delivered by the Materials Processing Institute, which will help the UK steel and metals sector to improve efficiencies and reduce emissions.

In addition to this, we are also providing up to £66 million in taxpayer support as part of the Industrial Strategy Challenge Fund to help key foundation industries, such as steel, to develop innovative technology to reduce energy and resource use. We have also established the £315 million Industrial Energy Transformation Fund, which aims to support businesses with high energy use to cut their bills and reduce carbon emissions.

In October 2021, we published the Net Zero Strategy, which committed to provide further support for research and innovation through the Net Zero Innovation Portfolio, which is a £1 billion fund that aims to accelerate the commercialisation of low-carbon technologies, systems, and business models in power, buildings, and industry. Initiatives led by the Industrial Decarbonisation Research and Innovation Centre will support the fuel switch to low carbon hydrogen on industrial sites.

Mass Media: Energy Supply Question for Department for Business, Energy and Industrial Strategy, UIN 65520

Asked by Kenny MacAskill on 27 October 2021

To ask the Secretary of State for Business, Energy and Industrial Strategy, what assessment he has made of the impact of rising energy costs for energy-intensive paper and print industries, and resultant costs for businesses supplied by those industries, on the sustainability of print media businesses.

Answered by Lee Rowley on 2 November 2021

The Department continues to engage constructively with energy intensive industries to further understand and to assess the possibility of offering help to mitigate the impacts of high global gas prices. Our priority is to ensure that costs are managed and that supplies of energy are maintained.

Manufacturing Industries: Energy Supply Question for Department for Business, Energy and Industrial Strategy, UIN HL3047

Asked by Lord Allen of Kensington on 13 October 2021

To ask Her Majesty's Government what assessment they have made of the effect of the increase in energy prices on the UK's manufacturing base; and what plans they have, if any, to assist industries to meet these additional costs.

Answered by Lord Callanan on 27 October 2021

The Government is determined to secure a competitive future for our energy intensive industries and in recent years have provided them with extensive support, including more than £2bn to help with the costs of electricity and to protect jobs.

This includes electricity price relief schemes for eligible energy intensive industries in sectors such as steel, chemicals, cement, ceramics, paper and glass.

Various funds are in place to support businesses with high energy use to cut their bills and reduce their carbon emissions, including the £315m Industrial Energy Transformation Fund.

Energy Supply: Prices Question for Department for Business, Energy and Industrial Strategy, UIN 51016

Asked by Gill Furniss on 17 September 2021

To ask the Secretary of State for Business, Energy and Industrial Strategy, what steps he is taking to reduce the UK's industrial energy prices.

Answered by Greg Hands on 22 September 2021

The Government is committed to minimising energy costs for businesses to ensure our economy remains strong and competitive. We deliver relief schemes to reduce the cumulative impact of some energy and climate change policies on UK's industrial energy prices for eligible energy intensive industries, such as steel, chemicals, and glass manufacturing.

Ammonia: Trade Competitiveness Question for Department for Business, Energy and Industrial Strategy, UIN 25019

Asked by Justin Madders on 30 June 2021

To ask the Secretary of State for Business, Energy and Industrial Strategy, what assessment he has made of the combined potential effect of (a) UK Emission Trading Scheme costs and (b) industrial energy oncosts on the competitiveness of UK ammonia production.

Answered by Anne-Marie Trevelyan on 9 July 2021

To mitigate adverse affects on competitiveness and the risk of carbon leakage from UK Emissions Trading Scheme (UK ETS) costs, ammonia producers receive a significant number of allowances for free. As part of the Free Allocation Review, we will be looking at possible future changes to the allocation of free allowances within the UK ETS. We published a call for evidence on 17 March 2021 which closed on 23 April 2021, and we will publish a response in due course.

The Government recognises that the UK's industrial electricity costs are currently higher than those in many other countries. This partly reflects how the costs of the electricity system are distributed across household and industrial customers. Nevertheless, we are committed to minimising energy costs for businesses to ensure our economy remains strong and competitive and we have therefore put various schemes in place to reduce the policy cost in electricity prices for those energy intensive industries most at risk of facing a significant competitive disadvantage, including production of ammonia.

Furthermore, the Government has schemes worth nearly £2 billion in operation, or in development, supporting energy intensive industries to decarbonise. These schemes include the Industrial Energy Transformation Fund to help companies reduce their energy costs and transition to low carbon technologies, the Industrial Decarbonisation Challenge Fund to support industry with the deployment of low-carbon technologies in industrial clusters, and to improve the resource and energy efficiency of foundation industries.

Energy Intensive Industries: Biofuels Question for Department for Business, Energy and Industrial Strategy, UIN 186153

Asked by Mark Pawsey on 23 April 2021

To ask the Secretary of State for Business, Energy and Industrial Strategy, what assessment his Department has made of the effect of the Green Gas Levy volumetric charges on the operations of gas intensive industries.

Answered by Anne-Marie Trevelyan on 29 April 2021

The Government will launch the Green Gas Levy with a per meter point approach later this year, the design of which was set out in the recent Future Support for Low Carbon Heat & Green Gas Levy Government Response. The impact of a per meter point approach on gas intensive industries is expected to be minimal.

However, the Government recognises the clear benefits of a volumetric levy that aligns policy costs more closely with energy consumption. The Government has been clear that any volumetric levy design must be simple to administer and deliver, minimise costs on consumers, and take consideration of the impact on energy intensive industries and other important UK industries. The Government will ensure it consults fully and works closely with stakeholders on any new proposals in this area.

Further details on the impact of transitioning to a volumetric levy will be set out in the impact assessment that will follow the government response mentioned above in due course.

Iron and Steel: Electricity Question for Department for Business, Energy and Industrial Strategy, UIN 170785

Asked by Alexander Stafford on 17 March 2021

To ask the Secretary of State for Business, Energy and Industrial Strategy, if he will provide additional support on electricity price disparity now that the UK has left the EU.

Answered by Nadhim Zahawi on 26 March 2021

There have been regular discussions with my Rt. Hon. Friend Mr Chancellor of the Exchequer on a wide range of issues of importance to the steel industry.

We recognise that industrial consumers currently pay higher electricity prices than elsewhere in most of Europe and we have therefore taken steps to reduce the indirect cost due to the Renewables Obligation, Contract-for-Difference and small-scale Feed-in Tariff for certain energy intensive industries, including the steel sector, and to provide compensation for the

indirect emission cost due to the UK Emission Trading System and Carbon Price Support Mechanism, including to the steel sector. These steps total more than £500m in relief to the sector between 2013 and the end of 2019 to make electricity prices more competitive, including around £150 million during 2019.

We have also introduced a metallurgical exemption from the Climate Change Levy. France and Germany have taken similar steps. Additionally, at Budget 2018 we announced £315 million for the Industrial Energy Transformation Fund (IETF) to support industrial energy efficiency and decarbonisation projects to bring energy costs down for these vital industries.

We are about the publish a consultation reviewing the compensation schemes for the indirect emission cost due to UK carbon pricing.

Ceramics Question for Department for Business, Energy and Industrial Strategy UIN 90284

Asked by Jonathan Gullis on 15 September 2020

To ask the Secretary of State for Business, Energy and Industrial Strategy, what steps his Department is taking to support research and development in ceramics.

Answered by Amanda Solloway on 23 September 2020

Through the Industrial Strategy Challenge Fund (ISCF), ceramics, along with the other 5 sectors that make up the foundation industries, are eligible for a share of the £66 million Transforming Foundation Industries. This Challenge looks to reduce environmental impact (including carbon emissions) through resource and energy efficiency. It is funding a number of projects relevant to the ceramics industry including hybrid sintering, development of new ceramic fibres for enhanced filtering, heat recovery in furnaces, robotics based optimisation and non-combustible cladding systems.

The Midlands Industrial Ceramics for Industry 4.0 project were recently awarded seedcorn funding of up to £50,000, under wave 2 of the Strength in Places Fund. The investment will build on existing ceramic and manufacturing strengths to help to make the Midlands a global leader in advanced ceramics.

The Government is implementing its ambitious research and development roadmap to ensure the UK is the best place in the world for scientists, researchers and entrepreneurs to live and work, while helping to power up the UK's economic and social recovery and level up the UK.

5.2 Oral Questions

Net Zero Emissions by 2050
HC Deb 21 September 2021 c 138

Rising Energy Costs: Impact on Industry and Businesses
HC Deb, 17 November 2021 c565

Energy-intensive Businesses
HC Deb, Tuesday 16 November 2021 c448

Global Gas Prices
HC Deb, Tuesday 16 November 2021 c 442

Energy-Intensive Industries
Volume 607: debated on Thursday 10 March 2016

6 Press articles

Mobile network operators urge investment in smart tech
Land Mobile
17 November 2021

Ministers pause rescue package plans for sectors hit by energy price rise
iNews
9 November 2021

UK asks Qatar to become gas 'supplier of last resort'
Financial Times
5 November 2021

UK industry hits out at government silence on helping big energy users
Financial Times
3 November 2021

Pleas over soaring energy costs are being ignored, industry fears
The Telegraph
1 November 2021

Ministers at odds over rescue package for manufacturers amid warnings of energy crisis closures
iNews
26 October 2021

UK steel: European rivals laughing at us over energy crisis
The Guardian
22 October 2021

High energy prices: most businesses don't deserve a bailout – here's why
The Conversation
13 October 2021

Energy crisis: UK government will only support firms on brink of closure
The Guardian
12 October 2021

Industry chiefs demand help 'within days' as energy prices cause alarm
The Times
12 October 2021

Rishi Sunak listed 'missing in action' as Tories muddle through energy crisis
Daily Record
11 October 2021

UK ministers should support industry through energy price surge
Financial Times
11 October

Stoke-on-Trent ceramics industry 'at risk' over gas price rise
BBR News
8 October 2021

7 Industry bodies

Energy Intensive Users Group

MakeUK, Manufacturing Sector Net-Zero Road Map, November 2021

UK Steel, Laying the foundations for a sustainable steel sector, October 2021

British Ceramics Federation, Ceramics sector calls for support to meet challenge of net zero, 10 September 2021; Ceramic Sector Joint Industry – Government Industrial Decarbonisation and Energy Efficiency Roadmap Action Plan, October 2017

Chemicals Industries Association, UK chemical industry accelerates in race to net zero, October 2021

Global Cement and Concrete Association, Cement and Concrete Industry Roadmap for Net Zero, October 2021

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