Department for
Business, Energy
& Industrial Strategy

HELPING BUSINESSES TO IMPROVE THE WAY THEY USE ENERGY

Government response

March 2019

Any enquiries regarding this publication should be sent to us at:
smeenergyefficiency@beis.gov.uk

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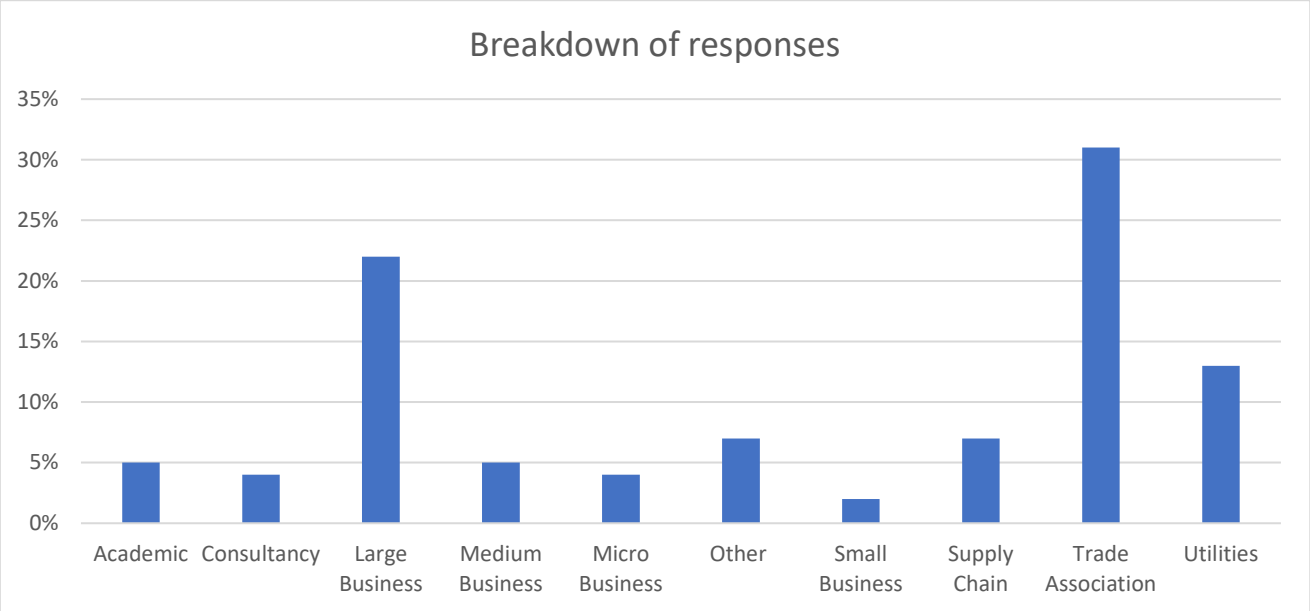
Chapter 1: Introduction

The Clean Growth Strategy (CGS) sets out our proposals for decarbonising all sectors of the UK economy through the 2020s. It explains how the whole country can benefit from low carbon opportunities, while meeting national and international commitments to tackle climate change. Additionally, the Industrial Strategy focuses on boosting productivity by backing business to create good jobs. By supporting investment, skills, industries and infrastructure, we will help increase the earning power of people throughout the UK. Improving the way businesses use energy is important in delivering both these strategies.

The CGS set a stretching ambition to support businesses to improve their energy efficiency by at least 20% by 2030. This could deliver up to £6bn in cost savings for businesses in 2030 and contribute up to 22MtCO_2e of non-traded carbon savings towards the fifth carbon budget. By 2030, we want business to be significantly more energy efficient.

Our Call for Evidence (CfE) on Helping Businesses to Improve the Way they use Energy outlined our suggested approach for delivering this level of ambition, including a range of proposals for driving change. It opened on 18 July 2018 and closed on 26 September 2018.

The CfE was published on Citizen Space and an email invitation seeking views was sent to approximately 100 stakeholders, including consumer groups, non-governmental organisations and industry interests. In total, 55 responses were received (19 responses through Citizen Space online and 36 responses by e-mail). Trade Associations had the highest number of responses. We would like to thank all respondents who submitted a response. A breakdown of responses can be found below.



Response to the Call for Evidence

The following chapters in this document correspond to the chapters in the CfE, covering Vision, Buildings, Market Building, SMEs and Industrial Processes. Each chapter sets out the questions that were asked in the CfE, summarises the views we received, and provides the Government's response. Due to the number of questions in Chapter 3 (Buildings) and Chapter 4 (Market Building), questions have been grouped together.

Chapter 2: Vision

The Vision chapter highlighted some of the energy trends and key recent developments in the UK. This included the decrease in energy use in the business and industry sectors since 2000, and the diversity of the commercial sector with over 50% of energy use coming from small and medium sized enterprises (SMEs). We sought views on any other developments and trends that would impact energy efficiency over the next ten years.

Additionally, we asked about the level of ambition set out in the CGS to improve energy efficiency in business and industry by 20% by 2030 and sought views on how to measure progress.

Summary of responses

1. What do you see as the key developments and trends that will impact on the energy efficiency market over the next 10 years?

There were 40 responses to this question from a range of stakeholders such as trade associations, energy providers, manufacturers, energy service companies (ESCOs), a local authority, energy management services and advisory organisations (some of which are SMEs).

The responses received centred around five main themes: government policy, electrical capacity, buildings, the workplace and smart meters.

For government policy, almost half the respondents raised the importance of strengthening existing regulations and schemes, as well as providing a clear policy framework. Respondents thought this was important as it would provide confidence and certainty for investors. Some respondents saw a role for Government in promoting investment in more efficient energy use by providing support capital investment in energy efficiency and demand side response.

Several respondents noted that increasing the capacity of the UK's electrical grid infrastructure would be essential due to increased electricity consumption across the UK. This would mean that flexible energy generation through demand side response, battery storage and carbon capture, usage and storage (CCUS) would become more important. One respondent noted that with a shift to new technologies, more capacity and connectivity must be built into existing distribution networks. This shift would have implications for energy efficiency at source and at end use, as well as implications for storage and the redistribution of energy.

On buildings, some respondents cited the importance of smart buildings which, through using software and smart monitoring technology, would allow building owners to take greater control of the energy performance of their buildings and processes. Smart buildings would ensure that energy is consumed where needed through building energy management systems. A study at Swansea university[1] on "active buildings" was also cited that could have the potential to make buildings energy self-sufficient i.e. functioning off-grid so reducing the burden on the whole system.

[1] https://www.swansea.ac.uk/press-office/news-archive/2018/chancelloroftheexchequerannounces36millionukfundingforswanseauniversitycleanenergyinnovation.php

A handful of respondents emphasised the increasing importance for businesses to provide workplaces that positively impacted on employee health and wellbeing. It was stated that this could in fact increase energy consumption with the need to supply better ventilation and longer occupancy hours to accommodate more flexible working patterns.

Finally, smart meters were cited by a few respondents as a key development that would impact the energy efficiency market over the next 10 years. It was noted that smart meters can empower energy efficiency through customer action. However, the need for ongoing support and advice to SMEs if energy savings were to be realised was stressed by some respondents. In particular, it was noted that assistance might be needed about how to use the data from smart meters in relation to time of use tariffs[2] to enable SMEs to switch energy consumption to off peak periods.

2. What are your views on the level of ambition and how we could measure our progress?

There were 34 responses to this question from a range of stakeholders such as professional bodies, trade associations, think tanks, large and medium energy providers, manufacturers, academics and local authorities.

On this question, most respondents requested more detail about how the ambition would be measured and what policies would drive it.

Some respondents stated that instead of focussing on a long-term target, there was a case for it to be broken down into smaller stages which would be more manageable. Respondents also suggested that the Government should set a carbon route map, broken down by sector or by individual policies.

One respondent suggested that businesses would be better able to plan energy efficiency measures if there was more clarity about when regulation would come into force, and how it would impact on them. The Minimum Energy Efficiency Standard (MEES) was highlighted as an example of how interim goals could have the capacity to make consistent improvements. Setting milestones, for example 2-3 years apart, could mean that businesses would need to have energy efficiency built into their short, medium and long-term business plans and would be more likely to be monitored at Board level.

One respondent emphasised the role for Government in identifying various industry leaders to act as influencers within their sectors to encourage the uptake of energy efficiency. Another respondent stressed the importance of having intermediaries tasked with delivering messages about the benefits of energy efficiency.

On measuring progress against the ambition, a number of respondents thought that a lack of data could make this difficult, for example not enough SMEs have an Energy Performance Certificate. Improving the quality and quantity of data on the Energy Performance Certificate was cited as important for measuring progress. One respondent also noted the benefits of understanding the energy performance of new buildings over their whole lifecycle.

Finally, a respondent asked for consistency in how businesses report progress so that, even with different sub targets and trajectories for different sectors, progress towards the overall targets can be tracked. It was noted that a centralised Streamlined Energy and Carbon

[2] https://www.ofgem.gov.uk/electricity/retail-market/market-review-and-reform/smarter-markets-programme/electricity-settlement

Reporting (SECR) database could increase the quality of data sources that could be used to monitor commercial consumption, without the need to collate data from several schemes.

3. What other measures and energy efficiency potential might be available to businesses to reduce energy demand?

There were 34 responses to this question from professional bodies, trade associations, think tanks, energy providers, manufacturers, academics and local authorities.

On reducing energy demand, a handful of respondents wanted the Government to introduce a loan scheme similar to Salix that provides interest-free funding to the public sector for energy saving improvements. Respondents also suggested that businesses which act early on energy efficiency should be incentivised and rewarded, for example through tax breaks.

Behaviour change was also emphasised by a handful of respondents as playing a key role in reducing energy use, for example in the form of staff educational programmes and training. One respondent argued that simply having an energy efficiency toolkit in place was of no use if a business and those working in it did not utilise it.

Some respondents cited the importance of a 'fabric first' approach, with a focus on looking at a whole building rather than single efficiency measures. Fabric improvements to buildings were noted as an effective way to save money on energy bills and provide a range of complementary benefits such as better temperature control.

A handful of respondents stated that the promotion and uptake of battery storage and heat pumps, cloud adoption, co-location of servers, and more efficient office equipment would also have a key role in reducing energy demand. Industry 4.0, which is the name given to the current trend of automation and data exchange in manufacturing technologies, was also referred to in responses as ushering in new technologies and techniques.

Government response

Our goal is to enable businesses and industry to improve energy efficiency by at least 20% by 2030. This will contribute to overall productivity by reducing the amount of energy required per unit of output. The Government acknowledges that many respondents sought clarity on how the ambition would be measured.

Progress towards our ambition will be measured by comparing absolute business energy use in 2030 to 2015 levels. Our progress towards this goal is monitored using Energy and Emissions Projections data. Each year, BEIS publishes updated energy projections (UEPs), analysing current and projecting future energy use in the UK. These projections consider market trends and existing policies, allowing us to monitor our current and projected progress towards the ambition.

Responses to this CfE have been valuable in identifying key trends that will impact on the energy efficiency market over the next 10 years. They have highlighted the importance of the role of government policy, increasing the capacity of the UK's electricity network, the workplace, buildings and smart meters. Additionally, the views expressed on the role of Government in offering incentives, promoting behaviour change and driving fabric improvements to buildings have offered a helpful insight into reducing energy demand which will feed into our ongoing policy development.

Chapter 3: Buildings

We estimate that the energy used in running non-domestic buildings is approximately half of the total energy use of UK businesses, excluding transport[3]. Enabling landlords and businesses to take effective action to reduce energy use across the existing and new build stock will be vital to delivering the 2030 ambition and meeting future carbon budgets. In the CfE we set out the challenges and potential options for reducing energy use in non-domestic buildings, and asked questions covering the following topics:

- Current and future building regulatory or mandatory standards
- Building performance data requirements
- The role of voluntary standards as performance drivers

Summary of responses

The majority of respondents to these questions (4-10) were large businesses, trade associations and organisations in the supply chain. There was little representation from small and medium sized businesses. A large number of respondents did not categorise their organisation. In terms of the number of people who responded, we received 38 responses to question 4, 28 responses to question 5, 29 responses to question 6, 32 responses to question 7, 26 responses to question 8, 31 responses to question 9 and 24 responses to question 10.

4. What evidence do you have on how increasing building standards could drive improved energy efficiency, or how energy efficiency improvements in buildings have resulted in wider benefits? Is there any evidence that increasing building standards would not drive improved energy efficiency?

5. Are there certain sectors that might respond to different approaches and what might they be?

6. What level of minimum standards and supporting trajectories could work for the wide range of business buildings? What are the key risks?

7. We would welcome your further views on how we can address the challenges of moving to higher building standards across the diversity of businesses and their buildings?

There was a broad consensus amongst respondents that minimum standards and the building regulations have delivered improved energy efficiency in non-domestic buildings. There was also agreement that tightening regulations would continue to drive improved energy efficiency in the future. However, most respondents were clear that this would only be the case if tighter standards could be enforced properly and be a part of a balanced package of policy measures.

[3] https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes

Emphasis was placed on the need for standards to try to reflect the heterogeneity of the non-domestic building stock, in both the character of the buildings and the use they are put to.

In terms of evidence, most respondents shared both qualitative and quantitative evidence of higher energy efficiency having positive impacts on businesses and the wider economy. This included evidence indicating that more energy efficient buildings support higher productivity, and that the market for energy efficiency is creating, and has the potential to create, more 'green collar' jobs.

Examples of building standards not driving improved energy efficiency typically pointed to the 'performance gap' (the difference between how energy efficiency measures and buildings are predicted to perform, and how they perform in reality). It was also noted that buildings, if designed disproportionately towards thermo-efficiency in winter, could end up 'overheating' in summer and require significant energy to cool.

Building on that, a clear theme to emerge from the responses to these questions was the benefits of ensuring that operational performance is brought into policy making when thinking about future building standards and improving energy efficiency.

There was broad consensus that raising minimum standards in the private rented sector and strengthening Part L of the Building Regulations could drive improvements across the wide range of commercial and industrial buildings. Some respondents endorsed the Green Finance Taskforce's[4] recommendation for all privately rented non-domestic buildings to achieve an Energy Performance Certificate B by 2035. For some, this target would not deliver the right outcomes if operational usage was not accounted for and if the standard could not be properly enforced.

Respondents broadly agreed that the approach to energy efficiency policy should include sector specific considerations. Minimum standards were endorsed by some respondents; in most of those cases respondents typically felt that the standards should allow for flexibility if they are to be fully effective. There was a strong sense that future policies would have different impacts on different sectors of the economy and according to whether buildings were owned or rented.

In terms of specific sectors, retail was noted as an example of a sector where ambitious energy efficiency standards might not be as effective. This was due to the fact that landlords will often hand over retail units in a 'shell and core' condition, which means that measures such as lighting, ventilation and air-conditioning may be installed after the lease is signed. This can lead to a situation where the landlord is required to provide a building at an EPC standard that may be fundamentally changed once the tenant installs measures that meet their unique requirements.

8. What type of data is important to you for measuring operational energy ratings of business buildings to help support or drive any future minimum standards?

Responses to this question were varied. One of the themes to emerge was the need for businesses to understand their energy consumption at a more granular level. Some examples

[4] http://greenfinanceinitiative.org/workstreams/green-finance-taskforce/

of this were half-hourly metered data, asset level data, and in multi-occupancy buildings individual tenant level data. Some types of data that respondents felt would be needed included: property type, floor area, occupancy, hours of operation, overall heat loss and gain. A small number of respondents stated that energy intensity (kw/m^2) could be a useful metric.

Some respondents, including trade associations and large businesses, considered that for operational data to drive the right outcomes it would need to be benchmarked against an industry standard. The ability for businesses to compare usage with each other was also considered to be something that could drive efficiency improvements.

9. What evidence is there to support the effective use of voluntary standards within the UK? What opportunities exist for expanding voluntary standards?

10. How can government support more widespread voluntary standards and other mechanisms including green leases? What are the barriers to development of such standards and products?

Whilst little quantitative evidence was supplied in responses, the NABERS[5] scheme in Australia was cited as a good example of scheme making best use of operational data to drive energy efficiency improvements. The BREEAM[6] assessment method was also quoted by a few respondents as driving improvements. The use of voluntary standards as a principle was broadly supported, with only a very small number of respondents claiming that there was limited or no evidence to support the effective use of voluntary standards. Though broadly positive about voluntary standards, several respondents cautioned against seeing voluntary standards as an effective driver of energy efficiency on its own. Responses suggested they should be utilised in conjunction with enforced minimum standards, which many respondents felt would be more effective. Respondents were clear that voluntary standards are not a replacement for regulation.

Some respondents suggested that the Government could offer more support in this area by lending credibility to supported standards, either through references in legislation or another form of endorsement. Public sector buildings were mentioned as an area where the Government could look to use public procurement or their own estate to demonstrate the effectiveness of complying with voluntary standards in driving energy efficiency improvements.

Government response

The Government knows that achieving the ambition of reducing business energy use by at least 20% by 2030 will require significant action across the non-domestic building stock. Responses to this CfE have been extremely useful in not only highlighting the complexity of the challenge, but also in suggesting pragmatic ways in which businesses, landlords, industry bodies, energy suppliers, energy network operators, the Government and others can work together to achieve it. Though this ambition will only be achieved through concerted and wholesale collective action, the CfE confirmed our understanding of the important role that the Government will need to play.

[5] https://www.nabers.gov.au/
[6] https://www.breeam.com/

From 1 April 2018, provided the action required is financially viable, all newly leased non-domestic buildings have been required to meet a minimum Energy Performance Certificate E standard before a lease can be entered into or renewed. From 2023, all privately rented buildings will be required to comply with this standard.

The Government intends to consult on the future trajectory for tightening standards in the rented sector in Spring 2019. This demonstrates the Government's commitment to providing landlords and businesses in the sector both time and certainty. Current and future rented sector policy is projected to be one of the key measures in driving energy efficiency improvements through the 2020s.

Similar steps will also need to be taken across the owner occupier and new build stock. As part of that process, the Government intends to consult on Part L of the Building Regulations in 2019, whilst also considering what further action will be required across sectors to deliver the 2030 ambition.

The Government acknowledges that many responses sought clarity on the use of the Energy Performance Certificate in order to better understand how energy efficiency will be measured in the future. The Government published a separate CfE on the use of the Energy Performance Certificate in July 2018 and a Government response will be published in due course.

The Government agrees with respondents that enabling businesses and landlords to better understand the operational performance of their buildings will be key to driving effective policy making and improved performance in the long term. The responses are consistent with the recommendation from the Green Finance Taskforce's report that the Government should look to introduce requirements for operational energy ratings from 2020. This will not only help businesses reduce their energy use in the existing stock but will also be a key enabler in delivering the buildings mission's aim to at least halve the energy use of new buildings by 2030.

The Government will be liaising with industry, trade associations and other key stakeholders this year to explore what steps are required to allow landlords and businesses to understand, and potentially where appropriate disclose, their operational energy use across both the existing and new build non-domestic building stock. Later this year, the Government intends to run a Call for Evidence on delivering the ambitious targets set out in the buildings mission. This will provide a further opportunity to consult a wide range of stakeholders on this issue.

The Government has been working with the Better Buildings Partnership as they have developed with industry their Design for Performance initiative, based on the principles of the successful NABERS scheme in Australia, and to test a UK approach to setting targets for operational energy use and performance for office buildings. Seven UK property developers, Great Portland Estates plc, Grosvenor Britain & Ireland, Landsec, LGIM Real Assets, Lendlease, TH Real Estate and The Crown Estate, have agreed to become pioneers to adopt the design for performance approach for at least one office in their development portfolio.

The Government will continue to work the Better Building Partnership (BBP) on this project. One of the overriding messages from respondents to this CfE was that making use of operational performance data will be key to meeting current and future ambitions. The Government agrees with respondents and will use the findings from the BBP project to review the ways in which operational performance can be measured and utilised across the diversity of the building stock to drive improved energy efficiency through current and future policy.

Chapter 4: Market Building

Employing over 141,000 people with a turnover of over £20bn[7], the UK energy efficiency sector is already making a significant contribution to the economy. However, the current market is significantly smaller than its potential size in comparison to some overseas markets.

We want to work with stakeholders to enable a sustainable, private sector led, energy efficiency market, building confidence across commercial and industrial customers.

The private sector is best placed to develop business models that support businesses to take up energy efficiency measures. Our CfE asked about the role of Government in facilitating this market.

Summary of responses

We asked about the barriers to development of this market and about the role of innovative business models to respond to these barriers:

11. How can the barriers to the development of the energy services market be overcome? Does this differ between sectors? Is there a role for the Government?

12. What innovative business models for energy efficiency could be developed or are already operating in other countries? How are they are helping to overcome barriers to energy efficiency? What more needs to be done to accelerate their development?

There were 27 responses to question 11, the most of which came from large business but also included SMEs, energy service providers, trade associations, supply chain and think tanks. There were 20 responses to question 12, again, most came from large business but also from the supply chain, trade associations, local government, small businesses and other service activities.

There was strong agreement from respondents that more needs to be done to boost the energy services market. A range of different types of intervention were suggested including the Government providing strategic support through more training for energy managers, a greater focus on quality assurance, and the role better data can play in encouraging lending and de-risking investment, in addition to improving access to finance. The importance of the Government providing greater long-term policy certainty was also highlighted.

The importance of stimulating demand amongst businesses was a clear theme that ran through the responses. Some respondents suggested that a way to stimulate demand was to strengthen the Energy Savings Opportunity Scheme (ESOS), while a few others suggested reducing the payback periods of energy efficiency measures through the provision of tax incentives.

[7] https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalestimates/2016

There was agreement that focus was needed on the following key areas to improve the supply of energy efficiency in the market. These were:

- standardisation to reduce transaction costs;
- aggregation of smaller projects to achieve sufficient scale to attract finance;
- improving the availability of data and digital tools; and
- encouraging lenders and third-party finance into energy efficiency.

Each of these are discussed in more detail below.

A few respondents suggested a range of innovative business models that could be adopted. These ranged from the provision of performance backed guarantees or an insurance mechanism with shared responsibility to support ESCO contracts; an accreditation scheme for ESCOs; and a role for model contracts.

Individual barriers

Questions 13 to 18 were designed to understand the variety of barriers that prevent businesses from accessing energy efficiency services from ESCOs, namely: the role of standardisation of the market to overcome barriers around trust and complexity, the potential for smaller projects to be aggregated so they attract capital, as well as the future role of digital tools and data to strengthen the evidence base for installing energy efficiency measures.

Quality & standardisation

13. What more needs to be done to improve standardisation to drive investment in energy efficiency? What role could the Government usefully have, if any?

14. Are the costs of M&V a barrier to implementing projects? What could be done to overcome this?

There were 23 responses to question 13, 7 of which came from large business with the other responses coming from small business, trade associations, the supply chain, a consultancy, and those who categorised themselves as ‘other’. There were 20 responses to question 14, 8 of which came from large business with other responses coming from SMEs, trade associations and the supply chain.

Most respondents called for the provision of standardised documents, including contracts as well as monitoring & verification (M&V) processes. One respondent suggested a set of generic energy reporting tools could be developed and made available to energy service providers for the collection of data and other details required to scope out energy efficiency projects.

There was no clear consensus on whether the cost of M&V is a barrier to implementing projects although just over half of the respondents deemed M&V too expensive. Several reasons were put forward, particularly complexity, with the quality, granularity and availability of historic energy consumption data seen as poor.

Suggestions to improve M&V for small businesses included publication of some free examples of M&V; improved metering and better access to operational data to reduce costs; and a potential light touch M&V process for SMEs. The Investor Confidence Project[8] was frequently cited as a potential solution. Of those who expressed concern about M&V costs, smart meters were suggested as a solution, making it easier to establish a baseline to be used to determine the financial viability of implementing measures.

A few respondents highlighted the potential for energy reporting to motivate action on energy efficiency while explaining this would be insufficient on its own to drive significant improvement and would need to be part of a wider package of activities.

Aggregation

15. Would aggregation help businesses, particularly SMEs, access more services offering energy efficiency and finance? What are the main challenges facing aggregation of energy efficiency?

There were 23 responses. The majority of respondents came from the supply chain, including ESCOs with other responses coming from trade associations, suppliers; local authorities and a large company.

Respondents were largely supportive, with the majority agreeing that aggregation could help businesses, particularly SMEs, access more services offering energy efficiency and finance. Only 2 respondents disagreed.

It was suggested that trade bodies and local authorities could both have a role in supporting, encouraging and coordinating aggregation. With a number of respondents highlighting the potential for local projects, possibly at retail parks or industrial parks.

Data

16. Would digitalisation and data analytics offer opportunities to improve the way businesses manage their energy use and make investment decisions? Please provide any evidence of whether this is already having an impact on the market for energy efficiency.

17. Would the ability to benchmark against similar businesses in the same sector be an effective means of spurring businesses to take action? Please provide evidence you have from industry initiatives or international examples.

18. What more could be done to facilitate the availability of better data on energy use for businesses?

There were 29 respondents to question 16, the majority came from the supply chain.

[8] http://www.eeperformance.org/

There were 25 responses to question 17. Again the majority of respondents came from the supply chain, including ESCOs, closely followed by trade associations, suppliers, local authorities and businesses.

There were 24 responses to question 18. Responses came from the supply chain including ESCOs, trade associations, suppliers, local authorities, a large company and a construction firm.

There was unanimous agreement that energy performance data is needed to make informed investment decisions on energy efficiency. Digitalisation and data could help improve the monitoring of energy use through smart energy management systems, helping businesses interpret the data they collect and supporting the business case for energy efficiency measures. A few respondents mentioned the potential for the smart meter roll out to assist in this area.

Most respondents agreed that it would be useful to be able to benchmark energy use against similar businesses in the same sector. Some respondents explained that benchmarking would allow businesses to understand how they compare and incentivise performance improvements. This could potentially provide a competitive element driving businesses to improve energy efficiency by showing the benefits of the action their competitors have taken. For some sites, such as data centres, it was suggested that measuring individual performance against historic performance would be more useful.

Those that thought that benchmarking was less useful tended to come from industrial and manufacturing sectors. They argued that benchmarking could not be made meaningful at the level of individual products and could jeopardise commercial confidentiality.

There was no consensus about whether responsibility for setting out benchmarks or standards should fall to the Government or to industry.

A small number of respondents said it would be more appropriate for sectors to lead this work. For example, one respondent urged caution as they felt sector specific benchmarking can become overly complex, and such initiatives are best developed by sectors themselves. They suggested the most appropriate role for the Government is to facilitate access to the underlying energy data, which would allow initiatives to use the data to create their own sector-specific benchmarking initiatives.

When asked about how best to facilitate the availability of better data on energy use for business, many respondents stressed that more granular data is needed to support business cases for investment in energy efficiency, and support for M&V. There were calls to facilitate giving SMEs access to their consumption data, as well as making it publicly accessible. It was felt that the availability of this performance data would support innovation in the development of products and services from lenders and energy efficiency providers. There was some emphasis on the role of utility companies to provide this data. However, it was also highlighted by some that some basic data analytic tools were already available to the market through energy suppliers.

Making energy efficiency finance more accessible

The following questions concentrated on stimulating lending to business, recognising the commercial benefits from energy efficiency and the need for finance to meet the high upfront costs of implementing some energy efficiency measures.

19. Is uncertainty over the realisation of energy efficiency savings a barrier to lenders offering energy efficiency tailored products?

20. What types of incentive might help de-risk energy efficiency financing and stimulate lenders to provide commercially viable and attractive energy efficiency financing? Do you have evidence of where it has worked in other countries or other sectors? Please provide details.

21. What could be done by lenders and the supply chain to "green tag" their portfolios and/or their energy efficiency products and services?

22. Are lenders and the supply chain already utilising existing datasets (for example the energy performance certificate database) in the development of products and services? If so, is this data sufficient? What more is needed?

There were 20 responses to question 19, covering a range of sectors, most came from trade associations followed by service activities professionals, the manufacturing sector, energy suppliers, local government, the supply chain, and a combination of information and communication sector respondents. There were 14 responses to Question 20, covering a range of sectors including manufacturing, energy suppliers, the information & communications sector, scientific and technical (including consulting) professionals, the education sector and local authorities.

There were 9 responses to question 21. These were from trade associations, the information & communications sector, a local authority, a standards body and an energy assessor accreditation scheme. There were 9 responses to question 22 from trade bodies, energy suppliers, supply chain including ESCOs, professional, scientific & technical professionals and local authorities.

A key theme to emerge was that uncertainty over the performance of energy efficiency measures was holding back lenders, and energy efficiency suppliers more generally, from investing or developing financial products (such as loans) for energy efficiency. It was felt that it can be difficult to measure the impact of energy efficiency measures once they are implemented as other external factors influence business energy use. For instance, production rates, expansion plans, new technology, staff numbers, and the weather all influence energy use.

The degree of the energy performance data available was frequently cited as playing a significant role in lenders' decision making on energy efficiency. For example, if the relevant data was available for lenders, it could be used to identify the market potential of energy efficiency and be used to develop financial products, or to evaluate their own loan portfolio to understand opportunities and risks around environmental regulations (such as PRS regulations).

However, overall, respondents largely agreed that lenders did not have the data to inform investment decisions, or the data at their disposal was not sufficiently granular. Suggestions predominantly looked at how to utilise existing datasets such as the Energy Performance Certificate register, though it was acknowledged that some lenders are already doing this. Respondents also suggested that lenders should "green tag" their portfolios and it was pointed out that there is nothing currently stopping lenders from doing this but there is no demand for it.

23. Could property fund managers and their investors be encouraged to deliver energy efficiency in their buildings? What are the opportunities and barriers to this model developing?

There were 12 responses to question 23 from local government, energy suppliers, manufacturing organisations and those who categorised themselves as 'others'.

The majority of respondents who answered this question believed that there is scope for property fund managers and investors to deliver energy efficiency savings in their buildings. Two respondents believed the market is generally moving in the right direction with large property investors driving the market in performance in this area. There was recognition that fund managers are being driven by investors seeking to reduce their risks by ensuring funds are invested in low carbon markets. Two respondents highlighted the tenant/landlord incentive split as a barrier and the role government can play in overcoming this.

Energy Technology List (ETL)

24. How can the Government deliver a step-change in ETL promotion and awareness raising to increase the number and diversity of actively engaged stakeholders, including manufacturers, suppliers, distributors, specifiers, advisers and end-users?

25. How can BEIS incentivise intermediary stakeholders (e.g. specifiers in the buildings sector) to use the ETL to encourage specification of ETL technologies and drive up take of ECAs claims?

26. How could the ETL better drive market innovation and better reward new high performing products?

It should be noted that this CfE closed on 26 September 2018 before the announcement made in Budget 2018 on 29 October 2018 that the Enhanced Capital Allowance for Energy-Saving Equipment would end in April 2020 and that the value of the Annual Investment Allowance would be raised to £1 million per annum from 1 January 2019 until 31 December 2020.

There were 18 responses to question 24, 14 responses for question 25 and 17 responses for question 26. Those who responded included trade associations, businesses, utilities, local authorities and specialist consultancies. The highest number of responses came from the trade associations.

Stakeholders generally responded that BEIS should increase its promotion of the ETL Scheme[9] with suggestions ranging from a national advertising campaign down to the specific targeting of SMEs who could benefit most. Stakeholders also thought that BEIS should work closer with the manufactures to encourage them to promote the scheme as part of their marketing. Others suggested that the trade associations should be actively involved in promoting the ETL to their members. It was also suggested that stakeholders would find more guidance or user toolkits helpful.

[9] https://www.gov.uk/guidance/energy-technology-list

Another recommendation from respondents was for Government to publish data on the uptake of the Enhanced Capital Allowance (ECA) Scheme to encourage greater understanding of the Scheme.

Some respondents said the ETL process was too cumbersome and asked for simplification. Other stakeholders made several suggestions for BEIS to reform the ETL. These included: moving away from products and towards manufacturing processes; improving the way that lighting products are included; and including duct work in the criteria. It was also suggested that BEIS should create a Government approved range of innovators to support new products.

There were a range of views put forward on measures the Government could take to incentivise intermediaries to use the ETL. These ranged from encouraging Energy Performance Certificate Assessors to highlight ETL as part of an assessment, to the publication of case studies to better explain the benefits of using the ETL. It was also suggested that the Government should lead by example in the public sector. Some stakeholders thought that better promotion of the ETL would encourage take-up, and that the benefits of the overall lifecycle costs available through using more efficient kit should be reinforced.

However, some stakeholders believed that the issue of increasing ETL uptake does not rest with intermediaries but, rather, the challenge lies in the complexity of the scheme with too many options being available and limited understanding amongst prospective beneficiaries. Many intermediates are driven by end-client specification and value engineering processes so the core understanding of ETL is needed by end-clients to ensure they realise those benefits. It was also noted that many companies do not, or do not need to claim ECAs due to the Annual Investment Allowance. There may be more benefit in linking the ETL to other measures or to expand it to new solutions and models.

There was a general agreement that the ETL would need to be changed if it is to drive more innovation in energy efficient products. Some stakeholders thought that the ETL should move away from a component or products-based scheme to take a process-based approach. Others felt that the ETL does not really work for digital solutions or reflect the circular economy agenda. It was suggested that the ETL should target and define the areas where innovation is needed and promote specific types of products and that BEIS should improve its communication with industry to ensure that rightful products are included.

Mixed views were received on whether a tiered or scaled approach might be more beneficial or overly complex. There was a consensus that the annual criteria reviews should be geared towards ensuring the list is sufficiently flexible and fast-moving. One stakeholder thought that the verification and accreditation process for new (innovative) products should be made as easy as possible, to ensure the ETL is the best source of information and accesses the most energy efficient equipment.

Government response

We know there is significant market potential in the non-domestic energy services market. Our review of the sector[10] was published alongside the CfE. This identified the major barriers to further growth in the energy efficiency services as (i) a lack of trust in the quality of service among potential clients, (ii) a lack of salience in energy efficiency among potential clients and

[10] https://www.gov.uk/government/publications/business-energy-statistical-summary.

(iii) low financial returns and high transaction costs in agreeing a contract, which leads to the supply chain targeting large projects.

We agree with the responses stating that the lack of demand for energy efficiency among businesses, and particularly SMEs, will need addressing if significant progress towards the CGS ambition is going to be made.

That is why we announced at the 2018 Budget that we would develop a new energy efficiency scheme for smaller business. The Call for Evidence setting out options for the new scheme has been published alongside this document.

Aggregation

We agree with respondents that a range of enabling policies could target barriers and stimulate growth in the market.

In response to this, BEIS has launched a £6m Boosting Access for SMEs to Energy Efficiency (BASEE) competition alongside this publication. This competition will provide funding towards the development of innovative business models, services or tools that reduce transaction costs and encourage the take up of energy efficiency buildings retrofit/refurbishment projects by SMEs. Projects are envisaged to fall broadly into three categories:

- Business models that look to simplify and standardise elements of the investment, for example through the aggregation and scaling up of smaller projects; or
- A new technical tool/solution, such as a platform which provides a standardised method of assessing and displaying potential savings from a portfolio of buildings, or to match potential businesses who want to install energy efficiency with technology providers.
- Other innovative solutions to facilitate investment in energy efficiency for SMEs.

For further competition details please email businessenergyuse@beis.gov.uk

Trust and quality assurance

We are taking forward options to address issues around trust, standards and quality assurance in the energy services market. The Government is currently implementing key recommendations from the Each Home Counts (EHC) Review, including the launch of the new TrustMark Government Endorsed Quality scheme during Green Great Britain Week in Oct 2018. The Government is continuing to work closely with TrustMark to ensure this new quality and consumer protection scheme is also fit for purpose for non-domestic consumers.

The Government is also participating in the Retrofit Standards Task Group, an output of the EHC quality and standards workstream, to explore the requirements for a Publicly Available Specification (PAS) standard for energy efficiency in the non-domestic sector. We are planning to model a non-domestic PAS on the new domestic standard (PAS 2035:2019) which is being developed to encourage a more holistic approach to the installation of energy efficiency measures/principles by embedding building assessments and design principles into the core of energy efficiency retrofit.

Data

As set out by respondents, some of the improvements around quality assurance will revolve around having better quality energy consumption data. This will help to inform business cases for the investing organisation, and help better assess energy efficiency potential for energy service market participants.

The Smart Meter Implementation Programme are running a Non-Domestic Smart Energy Management Innovation Competition (NDSEMIC). This Competition focuses on energy management products and services, based on data analytics using smart meter data, for smaller non-domestic sites. Its aim is to develop the market for, and maximise the overall uptake and impact of, such products and services, in order to help secure energy demand reduction within target segments of the non-domestic sector.

An interim report from the embedded research programme taking place alongside the competition is due to be published in Summer 2019 and a full series of reports collating findings and learnings around benefits realisation will be published in 2020. Alongside this, considerations are being made on how to ensure small businesses are aware of and can access data from their smart meters.

A consultation was recently published which included proposals on how best to improve non-domestic consumers' smart metering awareness and their access to data[11]. The consultation ended on the 21 February 2019, and the Government will be considering the findings during 2019, working alongside Ofgem as it considers the options for mandatory half hourly settlement[12] (as this also has impacts for the way non-domestic consumers view and understand their consumption data).

We are mindful of work underway by private sector organisations such as Grid Edge[13] and Google Deepmind[14] who are going a step further and have identified the potential of data and advanced analytics including machine learning and artificial intelligence (AI) in energy management solutions. AI can help compress and analyse the large amounts of historical data that a business produces. By monitoring the energy consumption behaviour of businesses, AI can offer solutions to optimize energy usage. The Government is currently exploring the most effective ways in which it can support the development and utilisation of AI, with a focus on how it can drive energy efficiency now and in the future.

Making energy efficiency finance more accessible

To meet the Clean Growth Strategy ambition to reduce business energy use by 20% by 2030, SMEs will have to implement energy efficiency measures and will need to access funding to pay for these. Therefore, more needs to be done to incentivise SMEs to take up finance.

High street banks have increased their offering to business on energy efficiency and are offering more tailored products in their area. These have a dual impact, they raise awareness of the benefits of energy efficiency among business so encouraging action, as well as providing finance.

[11] https://www.gov.uk/government/consultations/smart-metering-implementation-programme-realising-non-domestic-benefits
[12] https://www.ofgem.gov.uk/electricity/retail-market/market-review-and-reform/smarter-markets-programme/electricity-settlement
[13] http://www.gridedge.co.uk/our-technology-1
[14] https://deepmind.com/blog/deepmind-ai-reduces-google-data-centre-cooling-bill-40/

The Government is keen to continue working with banks to encourage SMEs to take up energy efficiency measures. We will explore options in the call for evidence for the new business energy efficiency scheme.

ETL

At Budget 2018, the Government announced that the Enhanced Capital Allowance for Energy Saving Technologies would end in April 2020. The Government also announced an increase in the Annual Investment Allowance limit to £1 million from its previous level of £200,000, effective from 1 January 2019 for two years. The increase will give businesses 100% first-year relief on qualifying plant and machinery investments up the value of £1 million.

There are no plans to close the Energy Technology List, which disseminates good information about the most energy efficient products available. BEIS will shortly be engaging directly with stakeholders to gather views on the role of the ETL beyond April 2020. The findings of this engagement exercise will help determine the future of the scheme.

If you or your organisation have views on the future of the ETL and would like to be involved in this stakeholder engagement, then please email ETLMailbox@beis.gov.uk to register your interest.

Chapter 5: SMEs

SMEs represent a significant proportion of business activity in the UK. Over 99% of the 5.7 million businesses in the UK are SMEs, and they account for over 50% of business energy use. Our modelling shows that action is needed from SMEs if we are to deliver the level of ambition set out in the CGS. However, the diversity of SMEs makes engaging with them challenging and we know that energy efficiency is not something that is generally prioritised by SMEs.

The CGS included a commitment to explore how to improve the provision of information and advice on energy efficiency to SMEs.

Summary of responses

27. What are your views on the availability and quality of information and advice on energy, and its appropriateness for SMEs?

There were 18 respondents to this question from a range of stakeholders including energy providers, supply chain (including ESCOs), trade associations, academics, manufacturing companies, large business, local authorities and an academic.

The majority of respondents stated that insufficient information on energy efficiency is available for SMEs, and what there is, is of poor quality. A small number of respondents, including key trade bodies recommended the creation of a website targeting SMEs that could act as single one-stop-shop for information for both domestic and non-domestic advice on energy efficiency.

However, there was not an overall consensus on the quality and quantity of information available, with one respondent highlighting there is a high volume of information available, but it is of poor quality and not from one source. While another explained that there is sufficient advice available but more needs to be done to make SMEs aware of it.

A small number of respondents suggested the lack of a funded and trusted national advice scheme for businesses undermines the Government's attempts to stimulate the market. One respondent suggested the creation of an open system interactive database with key themes and experiences, ideally with live data links allowing validated experts to interact and promote sensible energy reduction opportunities.

28. How do you think SMEs could be encouraged to take action on energy efficiency?

We received 22 responses to question 28 from energy providers, trade associations, local authorities, manufacturing firms, supply chain (including ESCOs), think tanks and academics.

Most respondents were clear, the Government must take a proactive role to engage SMEs with energy efficiency. Whilst recognising the difficulty of doing this, they felt there was a critical role for Government to break down the barriers that prevent SMEs from taking action.

One suggestion was that the Government should support business by communicating the benefits of energy efficiency, with the help of third parties such as accountants and trade

associations. The majority of respondents underlined that a one size fits all approach will not work when communicating with SMEs about energy efficiency, and highlighted the importance of segmentation to reflect the large variance of size, sectors, location, stage in the business cycle etc SMEs could be in.

A small number of respondents underlined the need to promote the wider benefits of energy efficiency. This is particularly relevant to those businesses with relatively low energy consumption but may have an interest in reducing waste and saving money. Some wider benefits suggested for promotion included reputational benefits, protecting the environment, increasing profitability and providing better thermal comfort.

Opportunity cost was also raised by trade bodies as a barrier to implementing energy efficiency**,** SMEs may want to save money and become more energy efficient, but this must be balanced against the cost, time and effort required to achieve this.

One respondent highlighted the challenges around effectively implementing policy instruments such as information, advice, voluntary audits, grants, loans or other financial help. It was suggested that a viable approach might include (i) a policy mix which includes universal mandatory measures, as well as those tailored to segments of SMEs; (ii) policy which taps into the values of SME owner/managers, and also the purposes of the business; (iii) policy which frames energy efficiency as delivering multiple benefits, beyond cost and carbon savings, which can align to businesses' strategic aims; and (iv) using existing business advice networks and funding structures which focus on SMEs to deliver aspects of energy efficiency policy.

A couple of respondents suggested extending the Energy Savings Opportunity Scheme (ESOS) to SMEs (but not to micro businesses). The potential for a local approach was highlighted by a small number of respondents, in particular the opportunities within Local Authorities to establish and run climate change partnerships or similar forums, in which local businesses commit to reducing emissions or improving energy efficiency. They could support and encourage one another by sharing experience and knowledge e.g. Camden[15].

One energy supplier described the difficulty in engaging SMEs with smart meter data and outlined the improvements it was trialling among its SME customer base to encourage increased usage.

Continuing the theme on data and trust, another energy provider highlighted SMEs lack of confidence on claims about pay-back periods. A Government backed 'energy saving fact checker' was suggested as a method to improve confidence.

29. To what extent are large companies able to influence the energy efficiency performance of their supply chain? Please provide examples of where this is working well.

There were 20 responses to question 29, coming from energy providers, trade associations, manufacturing firms, local authorities, advocacy and policy development organisations and supply chain organisations (including ESCOs).

There was no consensus among respondents on whether large companies should play a role in influencing their supply chain on energy efficiency but slightly more respondents were

[15] https://www.camdencca.org/

supportive than not. While some good examples were provided e.g. Northern Powergrid and Carlsberg, one manufacturer suggested that any influence would have to be limited to the energy efficiency of the products or materials they procure from their supply chain rather than from the buildings that the supplier occupies.

One large company explained they will be asking their supply chain about energy efficiency as part of compliance with ISO 50001 (energy management systems). Another respondent suggested that large businesses could stipulate ISO 50001 certification as a prerequisite for being a supplier. One respondent explained that it would only permit service providers to bid for work if they are ISO14001 (environment continuous improvement standard) certified unless it would be disproportionate to the value of the contract.

Three respondents cited BT as being a leader in influencing the energy performance of its supply chain, explaining it has written stipulations and conditions into certain key suppliers' contracts requiring carbon savings. We were also told of an unnamed large company who had contracted to undertake energy audits across its supply chain, and of a property firm which held an annual survey of their suppliers to understand how they consider energy and sustainability in their business.

While there was no overarching consensus, a few respondents thought that large business could have a significant influence on their supply chains and that some large business are beginning to push their suppliers to report the carbon footprint per item produced. However, one respondent provided a word of warning, that in practice, it is hard to administer and difficult to monitor compliance and ultimately onerous for the company to operate.

30. What advice from trusted partners (e.g. banks, trade bodies etc) is available to SMEs on energy efficiency? Please provide examples of where this is working well.

There were 12 responses to question 30. Responses came from a variety of sectors, including energy providers, trade associations, local authorities, academics and think tanks as well as businesses including manufacturers and those supplying energy efficiency measures (some of which are SMEs).

A number of energy suppliers and trade bodies highlighted the good work they are doing to raise awareness among their customers and membership. Energy assessors and advisors asked that the Government note the important role they also play in providing advice on buildings and energy use to businesses.

Respondents highlighted a range of additional trusted parties that could help the Government increase awareness of energy efficiency among SMEs. A number of respondents raised the potential for banks to increase the salience of energy efficiency among its customer base. Respondents also raised the importance of trade bodies providing advice as they are trusted by their membership. A small number of respondents suggested that accountants be trained to give advice as many SMEs engage with the accountancy profession. One respondent suggested Third Party Intermediaries (TPIs) could be encouraged to raise the profile of energy efficiency among their SME clients to add value to their role and differentiate themselves in the market.

Government response

At Budget 2018 it was announced that the Government would issue a call for evidence on introducing a new Business Energy Efficiency Scheme, focused on smaller businesses. This will explore options for increasing uptake of energy efficiency among SMEs and how to boost access to funding for the necessary up-front capital costs. The call for evidence has been published in parallel to this document and can be found here:

Energy efficiency scheme for small and medium sized businesses: call for evidence

We have also already taken steps to respond to known barriers including the publication of advice to SMEs. The CGS included a commitment to explore how to improve the provision of information and advice on energy efficiency to SMEs. BEIS undertook a Digital Discovery in 2017 to explore the demand for a Government website providing information on energy efficiency, exploring what similar information was already available and interviewing SMEs to understand their needs. It concluded that there is a great deal of good quality information easily available on line and a Government website would add little additional value.

A critical finding from the digital discovery, was that the vast majority of SMEs interviewed did not recognise energy efficiency as something they normally engaged with. As such, energy efficiency has fallen completely below the radar for the vast majority of SMEs. For this reason, it was recommended that BEIS step back from developing a website and instead, take action to raise awareness of energy efficiency among SMEs, a critical enabling step if SMEs are to act on energy efficiency.

Following this recommendation from the Digital Discovery phase, BEIS progressed to the next stage (Digital Alpha project) with a revised remit to build digital tools such as applications and calculator-based tools to get SMEs engaged on energy efficiency. This phase was designed to build prototypes and test them for technical feasibility and with users. However, we were unable to access the level of data required to deliver a tool that was considered sufficiently useful by those small businesses that tested the tool. Further information can be found in Annex A and the full report can be found here.

Chapter 6: Industrial processes

Since 1990 emissions from business and industry have almost halved, with energy efficiency being a key element of emission reductions as well as changes to the types of industries operating in the UK economy. Much of this reduction has taken place in the most energy intensive industries. However, more energy efficient processes could help manufacturing firms to reduce costs, cut carbon emissions and improve competitiveness.

Summary of responses

31.What more can be done? What are the key barriers for industry (and how do they compare to those in wider businesses)?

There were 31 responses to question 31 from a range of stakeholders including trade associations, energy providers, utilities, local councils, policy and research organisations and manufacturing and construction companies.

A number of respondents set out a range of barriers that were impacting on the delivery of improved energy efficiency. Key barriers cited were general economic uncertainty, by payback periods and other “hassle” costs, as well as a recognition that barriers impacted in different ways given the heterogeneous nature of manufacturing processes.

One energy services company explained that financial knowledge amongst energy managers needed to be improved to enable them to argue the business case for energy efficiency more effectively to company boards.

A small number of respondents indicated that the energy intensive industries had already done a lot on energy efficiency, given how core energy costs (specifically the UK’s relatively high electricity costs) were to the businesses, and there were challenges in going beyond the low hanging fruit. Government should also recognise links with supply side and innovation as energy efficiency wasn’t looked at in isolation by industry who would care about reducing energy costs and lowering emissions in the most cost-effective and secure way. There were references to combined heat and power, renewables and energy storage as other ways to achieve those objectives and reference to the Industrial Energy Efficiency Accelerator as a scheme that helped to bring forward innovative ideas.

Climate Change Agreements (CCAs) were viewed as a valuable balance of carrot and stick by some respondents, and the Industrial Heat Recovery Support (IHRS) programme was viewed as a good, but limited in scale, first step. The Government was also asked to deliver on an Industrial Energy Efficiency Scheme that included support for “less glamorous decarbonisation options”. Streamlined energy and carbon reporting (SECR) was viewed by some as potentially useful to raise the profile of energy use at Board level, though there were some calls for further simplification of the reporting framework.

Options set out that could help deliver significant remaining industrial process potential included implementation of Energy Savings Opportunity Scheme (ESOS) audits (potentially linked to incentives) and any further post 2023 CCA scheme. Any new interventions should be as simple as possible given the complexity of existing landscape.

32.What further energy efficiency potential is there in the diverse light industry sector? Please provide specific evidence and examples.

There were 8 responses to question 32 from a trade association, a policy and research organisation, manufacturing companies, an energy provider, a local council, a professional membership body and a large organisation.

In terms of what respondents said about further energy efficiency potential in the diverse light industry sector, one respondent highlighted that the CCA's combination of stick and carrot could unlock energy efficiency measures in light industry. One professional body explained that publicising available efficiency opportunities could be improved, for example, most people are aware of the benefits of LEDs but more needed to be done to improve awareness of other technology.

Government response

The Government is delivering a number of schemes to support industry, including light industry, to reduce their energy use and cut bills.

The £18m Industrial Heat Recovery Support (IHRS) Programme, designed to increase industry confidence to invest in technologies to recover heat from industrial processes, opened for applications on 15 October 2018. The IHRS has entered its first assessment windows, starting on 2 January 2019. Assessment windows will run throughout 2019 with the final assessment window beginning on 1 October 2019. The programme will run until March 2021.

Additionally, the Government is undertaking an evaluation of the effectiveness of the Climate Change Agreements (CCA) Scheme which is expected to conclude by the end of 2019 and inform decisions on any future CCA Scheme. The Environment Agency has published updated guidance in January 2019 to assist businesses gearing up for the next phase of the Energy Savings Opportunity Scheme (ESOS), which requires all large undertakings to audit their energy and confirm compliance to the Environment Agency by 5 December 2019. Government's evaluation of ESOS is expected to be published by summer 2019 to inform decisions on post-2019 ESOS phases.

Finally, the 2018 Budget saw an announcement of up to £315M Industrial Energy Transformation Fund[16] to support businesses with high energy use to transition to a low carbon future and to cut their bills through increased energy efficiency and investments in longer term decarbonisation technologies. This is in addition to the announcement by Claire Perry in December 2018[17] of a UK Mission to establish the world's first net-zero carbon industrial cluster by 2040 and at least 1 low-carbon cluster by 2030 with up to £170 million from the Industrial Strategy Challenge Fund[18] supporting the mission through the Industrial Decarbonisation Challenge.

[16] https://www.gov.uk/government/topical-events/budget-2018
[17] https://www.gov.uk/government/news/world-first-carbon-net-zero-hub-of-heavy-industry-to-help-uk-seize-global-economic-opportunities-of-clean-growth
[18] https://www.gov.uk/government/publications/industrial-strategy-the-grand-challenges/missions

Next Steps for Government

Respondents to the call for evidence provided comments, evidence and suggestions on our various policy proposals to meet the 20% ambition. The following list details the actions that the Government will take:

Vision

Government will measure progress on meeting the 20% ambition by comparing business energy use in 2015 to projected energy use in 2030. This will consider current policy, allowing the Government to monitor progress in relation to the ambition set out in the Clean Growth Strategy.

Buildings

From 1 April 2018, provided the action required is financially viable, all newly leased non-domestic buildings have been required to meet a minimum Energy Performance Certificate E standard before a lease can be entered into or renewed. From 2023, all privately rented buildings will be required to comply with this standard.

The Government intends to consult on the future trajectory for tightening standards in the rented sector in Spring 2019 and consult on Part L of the Building Regulations later in 2019, whilst also considering what further action will be required to deliver the 2030 ambition.

The Government acknowledges that many responses sought clarity on the use of the Energy Performance Certificates. A separate CfE was published on the use of the Energy Performance Certificate in July 2018 and a Government response will be published in due course.

The Government will be liaising with industry, trade associations and other key stakeholders this year to explore what steps are required to allow landlords and businesses to understand, and potentially where appropriate disclose, their operational energy use across both the existing and new build non-domestic building stock. Later this year, the Government intends to run a Call for Evidence on delivering the ambitious targets set out in the buildings mission. This will provide a further opportunity to consult a wide range of stakeholders on this issue.

The Government will continue to work with the Better Building Partnership on the Design for Performance initiative and will review the ways in which operational performance can be measured and utilised across the diversity of the building stock.

Market Building

Aggregation

BEIS has launched a £6m Boosting Access for SMEs to Energy Efficiency (BASEE) competition alongside this publication. This competition will provide funding towards the

development of innovative business models, services or tools that reduce transaction costs and encourage the take up of energy efficiency buildings retrofit/refurbishment projects by SMEs

Trust and quality assurance

Government is currently implementing key recommendations from the Each Home Counts (EHC) Review, including the launch of the new Trustmark[19] Government Endorsed Quality scheme during Green Great Britain Week in Oct 2018. The department is continuing to work closely with TrustMark to ensure this new quality and consumer protection scheme is also fit for purpose for non-domestic consumers.

BEIS is also participating in the Retrofit Standards Task Group, an output of the EHC quality and standards workstream, to explore the requirements for a Publicly Available Specification (PAS) standard for energy efficiency in the non-domestic sector. We are planning to model a non-domestic PAS on new the domestic standard (PAS 2035:2019) which is being developed to encourage more holistic approach to the installation of energy efficiency by embedding building assessments and design principles into the core of energy efficiency retrofit.

Data

The Smart Meter Implementation Programme is running a Non-Domestic Smart Energy Management Innovation Competition. (NDSEMIC). This Competition focuses on energy management products and services based on data analytics using smart meter data, for smaller non-domestic sites.

An interim report from the embedded research programme taking place alongside the competition is due to be published in Summer 2019 and a full series of reports collating findings and learnings around benefits realisation will be published in 2020.

A consultation was recently published which included proposals on how best to improve non-domestic consumers' smart metering awareness and their access to data. The consultation ended on the 21 February 2019, and BEIS will be considering the findings during 2019, working alongside Ofgem as it considers the options for mandatory half hourly settlement[20] (as this also has impacts for the way non-domestic consumers view and understand their consumption data).

Making energy efficiency finance more accessible

Budget 2018 saw an announcement that the Government will issue a call for evidence on introducing a new Business Energy Efficiency Scheme focussed on small businesses. This has been published alongside this Government response.

ETL

BEIS will shortly be engaging directly with stakeholders to gather views on the role of the ETL beyond April 2020. The findings of this engagement exercise will help determine the future of the scheme.

[19] https://www.trustmark.org.uk/blogs/news/2018/10/18/government-names-trustmark-as-the-new-all-encompassing-mark-of-quality-for-consumers-in-and-around-the-home
[20] https://www.ofgem.gov.uk/electricity/retail-market/market-review-and-reform/smarter-markets-programme/electricity-settlement

If you or your organisation have views on the future of the ETL and would like to be involved in this stakeholder engagement, then please email ETLMailbox@beis.gov.uk to register your interest.

SMEs

Budget 2018 saw an announcement that the Government will issue a call for evidence on introducing a new Business Energy Efficiency Scheme focussed on small businesses which has been published alongside this Government response.

Industrial Processes

The £18m Industrial Heat Recovery Support (IHRS) Programme opened for applications on 15 October 2018. Applications are still open and assessment windows will continue throughout 2019.

The Government is undertaking an evaluation of the effectiveness of the Climate Change Agreements (CCA) Scheme which is expected to conclude in Autumn 2019 and inform decisions on any future CCA Scheme.

The Environment Agency has published updated guidance in February 2019 to assist businesses gearing up for the current phase of the Energy Savings Opportunity Scheme (ESOS). Government's evaluation of ESOS is expected to be published by summer 2019 to inform decisions on post-2019 ESOS phases.

Budget 2018 saw an announcement of up to £315M Industrial Energy Transformation Fund[21] to support businesses with high energy use to transition to a low carbon future and to cut their bills through increased energy efficiency and investments in longer term decarbonisation technologies.

[21] https://www.gov.uk/government/topical-events/budget-2018

Annex A - Findings from the SME Digital Discovery and Alpha Project

Digital Discovery

The Clean Growth Strategy set a stretching ambition to improve energy efficiency in business and industry by 20% by 2030. SMEs account for 99% of UK business and have a very low awareness of the benefits of energy efficiency. To try to address this a Digital Discovery project was completed in November 2017. The aim of the Discovery project was to research what information for businesses already exists in the public domain and conduct user interviews to see if there is a need for a new or additional product.

The Discovery was funded by BEIS and delivered through external contractors. It explored the demand for a website targeting SMEs with information about energy efficiency.

The Discovery concluded that sufficient information is already available online e.g. from BEIS (SME Guide to Energy Efficiency), Carbon Trust (Better Business Guide to Energy Saving), EON (10 Tips for Energy Efficient Workplace) all of which are easily accessible via a google search. As one small business said “It’s the age of information…if I wanted to find something, I can. It’s about making the choice to look”.

Interviews with SMEs clarified that for the vast majority of SMEs, energy efficiency had not been considered at all: there are many other critical tasks associated with running a business crowding out the messages around the benefits of energy efficiency.

These findings were further supported by the journey map which found that the majority of SMEs were not actually starting the journey towards energy efficiency.

The key findings from the research were:

(i) information is readily available on the web on energy efficiency should time be taken to look

(ii) there is a high level of apathy among SMEs on the subject,

(iii) an extremely small proportion of SMEs start the journey towards energy efficiency and

(iv) there is little awareness of the benefits around energy efficiency.

The research indicated a need to move away from the provision of information on energy efficiency (the original idea of a website) to designing tools that motivate SMEs to take action on energy efficiency and start them on a cycle of continual improvement.

Digital Alpha

Following the Discovery, a Digital Alpha project concluded in July 2018, this was a 12-week project to build 3 prototypes with the aim of motivating SMEs to make a significant contribution to the 20% ambition. An Alpha project is undertaken to build prototypes and test them for technical feasibility to ensure only digital projects that reflect users’ needs are built. The aim of

the 3 prototype digital tools was to inspire and support SMEs to make changes that increase their energy efficiency, making it a core part of their day to day business.

The contractors used the evidence gathered in the earlier Discovery phase to identify the incentives/motivations for SMEs to engage with energy efficiency. Money and regulation were identified early on as a motivation for engagement. User personas were used to provide a realistic representation of important customer groups by articulating their common behaviours, needs, pain points and aspirations. For example, this included the persona of a manager who is under financial pressure to save money and is also focused on growing their business. For this customer, any energy efficiency tool would have to be low cost and save them money. This approach ensured that the design process and user testing was orientated around real customer needs and expectations throughout the project.

Three tools were built and prototyped and they included:1. Compliance Tracker

This was an online tool that landlords could enter their address into and find out if their property is compliant with The Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015. These regulations were recently amended which means that from April 2018, landlords of privately rented domestic and non-domestic property in England or Wales must ensure that their properties reach at least an Energy Performance Certificate rating of E before granting a new tenancy to new or existing tenants. With the online tool, users were shown recommendations on how to improve their Energy Performance Certificate rating. However, on testing with landlords, the tool was found to add insufficient value to a landlord's existing journey to compliance as many of them have existing surveyors or contractors to help them with this.

2. Zapp

This was aimed at offices and was a 'system tray application' that is downloaded, and the software shows in the bottom taskbar of your desktop computer. It aimed to nudge office employees to make behavioural changes supporting energy efficiency. It prompted them to check the heating/air conditioning each morning based on the weather forecast and gave a reminder to turn everything off at the end of the day whilst also auto-hibernating computers. The contractors recommended an extended test period to test whether the tool provides value to businesses over time, reflecting the context in which the tool will be used (i.e. long term, daily use).

We decided not to take this tool forward. While it tested well with the (very) limited user testing undertaken, there are similar tools on the market already, which look very impressive but have not necessarily gained much traction in the market. We could see very little added value in progressing this tool, considering alternatives exist.

3. Show me the money

This was an on-line tool that SMEs could enter their address into and receive their Energy Performance Certificate recommendations, costs and impact estimates, with links to local tradesmen who can help them implement the energy efficiency measures. Testing was undertaken with SMEs, using dummy data and this tested well. Dummy data was used as we found that Energy Performance Certificates for non-domestic buildings contained less financial data compared to domestic Energy Performance Certificates, particularly around cost data, typical savings and payback calculations. When testing this tool users explained that they needed some of this financial data if they were going to proceed and contact local tradesmen.

The lack of data around potential savings and payback times for non-domestic Energy Performance Certificates meant this tool was not technically feasible.

Findings from the digital alpha project

The contractors spoke to 67 SME owners, employees and commercial landlords as part of the Alpha and some interesting quotes from the interviews included:

"I don't have time to look at online articles and websites that provide lengthy explanations of potential EE measures".

"If I knew there was something I could do easily, I would definitely do it. I will be put off if I don't know how to do it. As an SME owner I'm a generalist, there is no department for this stuff. I have to know about these things and it's hard".

"My landlord is very unhelpful and completely unwilling to invest into EE measures".

"I don't trust the cost estimates I see out there, they aren't based on my business – that's ok, but I knock off 50% off the savings".

"There is loads of information out there and it doesn't matter how you package it up – people aren't interested".

Some of the key findings from the Alpha were:

Misalignment of incentives for action

These fell into 3 categories –

(i) Structural misalignment: the split of responsibilities between tenant and landlords was particularly strong. This could be exacerbated by the current move towards shorter commercial leasehold periods that could reduce the tenant's willingness to make improvements if they will be moving on. Some of the interviews also found that whilst tenants were interested in energy efficiency, convincing their landlords was more difficult.

(ii) Financial misalignment: for many SMEs, energy cost is not significant, so they would demand a quick return on investments. Additionally, many SMEs consider energy spending and energy use to be opaque.

(iii) Organisational misalignment - SMEs are incredibly time poor and energy efficiency has not gained a level of recognition or priority to get noticed or for action to be taken.

Drivers for energy efficiency

SME engagement is driven by money and regulation. Regulation is a high strength driver and we found the landlords interviewed were committed to meeting the regulatory requirements put on them. They were aware of the Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015 and committed to meeting them (albeit they were often keen to do this at the lowest cost possible).

Money: SMEs interviewed considered cost savings to provide the strongest motivation for action, explaining they would look for a payback period of between 0 and 2 years (this was true for all sectors). Promoting cost savings clearly resonates with SMEs and is a rational approach, but earlier BEIS research has shown that this alone will not lead to implementation of energy efficiency measures. The main driver seems to be the absolute size of the cost saving vs the hassle (or perception of hassle) of achieving it.

The third driver was ethical/social, which proved to have limited weight with the SMEs we spoke to, regardless of all sectors - although there was notably more resistance from landlords. Ethical and social incentives are becoming more powerful as awareness of environmental impact grows. While they are not the priority for SMEs, they can be interwoven with other incentives and this may have impact.

We found the narrative of "waste reduction" had traction with most SMEs interviewed rather than the energy efficiency narrative.

In summary, SME action is driven by the wider business case - all SMEs we spoke to are very time poor, they make decisions based on how they can best apply their limited time and resources to driving the success of their business. Time is the crucial barrier to action. To drive action on energy efficiency, tools must present a business case to SMEs that accounts for the opportunity cost of their time, not just a positive financial case. A full business case is complex, and people default to what they have knowledge of.

This publication is available from: www.gov.uk/government/consultations/helping-businesses-to-improve-the-way-they-use-energy-call-for-evidence

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