



Best Policy Practices for Supporting Energy Efficiency in SMEs in UK

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ABSTRACT

It is widely recognised that energy efficiency has a key role to play in the energy transition in industrial and tertiary sectors. An increasing number of countries are implementing policies to promote energy efficiency in productive sectors and to enhance energy efficiency investments by companies of different sizes and structures. Technical and economic barriers prevent fully exploiting the benefits of energy efficiency, particularly in small and medium sized enterprises (SMEs) which form the backbone of the global economy. It is estimated that 99% of all companies in Europe are SMEs, representing 60% of employment and 50% of turnover. In the UK, the share of the working population employed by SMEs is just over 61%, with micro enterprises (<10 employees) accounting for 21%. Support for SMEs takes many forms in the UK and is offered at differing levels of government and to SMEs in different sectors.

This paper, developed as part of the EU-funded project, LEAP4SME, aims to provide an overview of the existing SME-targeted energy efficiency policy measures in the UK, and to identify best practices. The paper is also informed by separate research conducted by Energy Saving Trust on behalf of the UK Climate Change Committee which investigated the challenges faced by SMEs in terms of decarbonisation. The review of measures highlights that many smaller-scale programmes are in force, at different levels: national, regional and local government. Many of the support measures take the form of financial assistance either through grants, loans or subsidies. SMEs are also supported in different parts of the UK via awareness raising campaigns and access to information and advice. In terms of funding, this is available through different levels of government as well as the private sector and institutions which straddle this typical divide. In addition to the overview, the analysis identifies a number of barriers and success factors, an understanding of which should to enhance the replicability of best practices in other sectors and contexts.

Introduction

The UK is implementing policies to promote energy audits, energy efficiency, and the use of renewable energy in small and medium sized enterprises (SMEs). In some cases, these policies have been specifically targeted at SMEs, while others are targeted at businesses of all sizes. In some cases the implemented policies apply to SMEs in all sectors on a national scale (as well as to larger businesses in some cases), while other support programmes are delivered only in specific regions or are only available to businesses in certain sectors. The objectives of these policies vary, some aim only to achieve energy or carbon savings, while others have broader objectives such as capacity building or enhancing SME market competitiveness and innovation.

Support for SMEs takes many forms in the UK and is offered at differing levels of government and to SMEs in different sectors. Much of this support takes the form of financial assistance either through grants, loans or subsidies. SMEs are also supported in different parts of the UK via awareness raising campaigns and access to information and advice. This review presents the findings of research into the current energy efficiency and energy audit policy instruments which effect SMEs in the UK, with a view to assess the impact of these policies and understand how they can be strengthened in order to encourage more SMEs to undertake energy audits and implement the recommended energy-saving measures.

SMEs in the United Kingdom¹

The UK uses the EU definition of a small and medium sized enterprise (SMEs), meaning a business which has fewer than 250 employees and an annual turnover under €50 million. A micro business has fewer than 10 employees and an annual turnover under €2 million, a small business has fewer than 50 employees and an annual turnover under €10 million. In 2021 in the UK, there were a total of 5.6 million SME which account for 99% of all businesses; a level comparable to other countries across Europe. 95% of SMEs in the UK are micro businesses (5.3 million) with under 10 employees and they account for 21% of employment and 14% of turnover.

Overall, SMEs account for 61% of employment, which is a little lower than the average for of 65% for Europe (European Commission, 2021; Eurostat, 2021) and account for 52% of turnover, which is comparable to the average of 54% seen across Europe. The sector with the largest number of SMEs was construction, which accounted for 16% of SMEs in the UK in 2021, followed by SMEs engaged in professional, scientific and technical activities, which accounted for 15% of SMEs and SMEs in the wholesale and retail trade and repair sector accounted for 10% of SMEs. The SME sector with the largest turnover and employment share is wholesale and retail trade, which accounted for 35% and 14% respectively. The British Business Bank estimate that between 43% and 53% of UK business emissions are from SMEs (which corresponds to as much as 36% of total UK emissions).

Literature review

The UK development of energy efficiency policies began in 1973 as a consequence of the first oil crisis with a focus on the economic aspect of energy supply. During the 1990s the focus shifted to addressing climate change with the creation of Energy Saving Trust (1992) and Carbon Trust (2000) to deliver energy efficiency programmes and to align UK objectives to the Kyoto protocol and EU objectives. An excellent review of the evolution of UK policies from 1973 to 2013 (the commencement date of the UK Green Deal) can be found in Mallaburn and Eyre (2014). Despite the latter half of this period seeing greater devolution to Northern Ireland, Scotland and Wales energy policy continued to be primarily developed through a top-down approach with main competences held by the central UK Government administration. However, since 1995, due to the Home Energy Conservation Act, local authorities have specific responsibility in the definition of strategic energy conservation plans including providing practicable cost-effective measures necessary to achieve ‘significant’ energy savings (Collier and Löfstedt, 1997). This change was important for the effective implementation of energy audit programmes for SMEs, that tended to be more effectively engaged with through local authority consultants, regional energy agencies and business associations, rather than directly by national governments (Thollander, Danestig and Rohdin, 2007; Lamoureux, Movassaghi and Kasiri, 2019).

In 2007, the UK government committed to a 34% reduction in greenhouse gas (GHG) emissions by 2020 and a 15% share of energy from renewable sources and a 18% reduction in final energy consumption (~130

¹ Business population estimates for the UK and the regions 2021, Department for Business, Energy & Industrial Strategy [link](#)

Mtoe). In order to achieve these stated objectives the main mechanisms were the Renewable Obligation (RO) in the electricity sector, the Renewable Transport Fuel Obligation (RTFO), and the Renewable Heat Programme (RHP) for buildings (Anandarajah and Strachan, 2010). The UK promoted increases in renewable energy by using Tradable Green Certificates (TGCs). During 2007 and 2008 the TGC had relatively low effectiveness compared to the feed-in-tariff (FIT) scheme, due to the low maturity of the technologies involved (Haas *et al.*, 2011). The FIT proved highly effective at driving the deployment of small scale renewable energy projects, particularly solar PV and onshore wind. In recent years the FIT has been scaled back before being closed to new entrants in 2019. Well-designed (dynamic) FIT are still considered by some to be the most effective instruments to reduce renewable energy project risk while increasing return (Polzin *et al.*, 2019). The Contracts for Difference scheme, an auction mechanism for large scale renewable energy projects, has proven effective at driving down the cost of new renewable energy projects, particularly offshore wind. The latest funding round, which has recently closed, has seen 11 GW of new projects receive funding².

On the energy efficiency side, the UK was the first country in Europe to introduce obligations on suppliers to deliver energy savings for their customers (Energy Efficiency Standards of Performance, EESoP 1). Since 1994, the programme has evolved (EESoP 1-3, EEC 1-2, CERT from 1994 to 2012) and increased its ambition in terms of target and budget up to the implementation of European Energy Efficiency Directive (EED) (Rosenow, 2012). Different policies have been developed to increase final use energy efficiency in order to help achieve net zero carbon emissions by 2050, a target set in 2019. The UK was the first major economy to set such a target. Improvements in final use efficiency were achieved first in buildings (Kern, Kivimaa and Martiskainen, 2017), both in the residential (Dowson *et al.*, 2012; Kelly and Knottenbelt, 2015) and non-residential sectors (Edwards, 2006). Secondly, in transportation systems (Chaudry *et al.*, 2022). And thirdly in (mainly energy-intensive) industries (Barker, Ekins and Foxon, 2007).

Industry is recognized as one of the main drivers to achieve the net zero emissions target. Most of the industrial policies were adapted to the EED, including the obligatory energy saving schemes under Art.7 and audits and energy management systems under Art. 8, linking the objectives of energy efficiency with the decarbonisation aims in multiple mechanisms (Malinauskaite *et al.*, 2019). In fact, with ambitious and appropriate energy efficiency policies industry can reduce its GHG and energy demand by 77% and 31% respectively from 2010 to 2050. A substantial reduction up to 2030 will be achieved thanks to the emission mitigation obligations (and the emission trading schemes). However, additional policies must be implemented to reduce dependency on gas, continue to reduce fuel poverty, increase the impact of renewables and technology- or sector-specific instruments (Fais, Sabio and Strachan, 2016).

The potential of SMEs in terms of energy and carbon savings are widely recognised. However, due to the heterogeneity and large number of different profiles, SMEs have tended to be overlooked by energy efficiency policies. While SMEs can account for over half of business energy consumption, there is still much that is unknown regarding SME energy use, the energy efficiency opportunities and energy-related decision processes within SMEs (Fawcett and Hampton, 2020). Given these unknowns there is growing interest in the energy efficiency of SMEs in the UK with specific policies being implemented, i.e. the closed Green Business Fund (Carbon Trust, 2019) - and studies focused on:

² Contracts for Difference Allocation Round 4 results. See: <https://www.gov.uk/government/news/biggest-renewables-auction-accelerates-move-away-from-fossil-fuels>

- Positive impact of creation of networks to help SMEs to overcome energy efficiency barriers (O’Keeffe, Gilmour and Simpson, 2016)
- Implications of sustainability as business case in SMEs (Revell, Stokes and Chen, 2010)
- Energy efficiency practices, greenhouse gases, material, and resource efficiency inverted U-shaped relationship with financial performance of SMEs (Boakye *et al.*, 2020)
- Techniques to enhance environmental engagement as drivers for EE in SMEs (Hampton *et al.*, 2019)
- Practical issues related to the implementation of energy management systems in SMEs (Hampton, 2019)
- Benefits of development policies related to the implementation of obligations on Demand Side Management in SMEs (Warren, 2014)
- Potential of smart technologies (smart heating controls, smart meters, integrated building management systems, smart lighting systems, demand responsive energy management, Big Data for logistics and transportation, and fleet management) and micro-generation SMEs (Warren, 2017)

Methodology

A literature review was conducted on the historical energy policies that have impacted SMEs over the last decades to help understand the UK’s approach to SME energy support, to date. A policy mapping exercise was undertaken to identify and categorise the energy efficiency and audit related policy instruments or support programmes that impact SMEs in the UK. Policy instruments that specially target SMEs and policy instruments that affect SMEs as part of a wider target group were both included in this review.

For each of these policies, details were gathered on the support category, such as financial support or information and advice; support focus, whether it is energy audits, energy efficiency, renewable energy or other; the target industry and whether all SMEs are covered; the coverage area, be it regional, national or pan-European; successes, challenges, lessons learned; and barriers to SMEs in taking up the support. Data on the impact of these policies was collected from evaluation reports, where available. Because a number of policy instruments identified are still active, there tended to be limited evaluation information making an assessment of the impact of these policies challenging.

Current schemes and programmes for energy efficiency in SMEs

Overview

The policy mapping showed that current policies and schemes in the UK which support SMEs with conducting energy audits and implementing energy efficiency measures can be placed into four broad categories; financial support; information and advice; regulation; and national plans and strategies. The primary aim of the financial support is to provide SMEs with grants, loans, subsidies, tax relief or a combination of these. Information and advice is provided through awareness raising campaigns, guidance and advice services. The regulatory rules set minimum energy standards for buildings which SMEs operate out of. Finally, there are broad national strategies for energy efficiency and decarbonization which also affect SMEs.

In terms of financing, there are options available to SMEs through different levels of government as well as the private sector and institutions which straddle this typical divide. One such example is the British Business Bank and its long-running Enterprise Finance Guarantee (EFG) (UK Government, 2014) - a loan guarantee scheme to encourage additional lending to viable SMEs. EFG guarantees loans to fund the future growth or expansion of a business, from £1,000 to £1.2 million. Finance terms are from three months up to 10 years for loans and asset finance and up to three years for revolving facilities and invoice finance. Since 2009 it has lent £5.5bn. It is often the case that these offerings of financial support or advice provision can contribute to

improving SME energy efficiency but that this tends not to be the only thing that SMEs can invest in or seek advice on. This model is illustrated by the network of Catapult centres situated across the UK which have supported over 8,300 SMEs as of Autumn 2021. The Catapult centres act as a network and facilitator, allowing businesses to access necessary infrastructure, expertise and technology. The Catapult centres focus on supporting innovative new technologies and industries such as high value manufacturing, cell therapy, offshore renewable energy and future cities among others. While the support available may lead to improvements in energy efficiency the support is more general than this.

Examples of information and awareness raising services are provided at both the national, sub-national and local government level. At the national scale a number of guidance documents and tools have been produced in recent years by relevant UK Government departments to inform businesses of the benefits of energy efficiency (Department of Energy & Climate Change, 2015) and provide an overview of the energy efficiency services market (BEIS Research, 2018) among others. At the subnational level England typically falls short relative to Wales, Scotland, and Northern Ireland. For example, there is no national support and funding programme for SME building energy efficiency in England, other than the £5-6,000 Boiler Upgrade Scheme grant for low carbon heating. In Scotland, free audits and accompanying zero interest loans are available, up to £100,000, and there is a national Business Energy Scotland advice service. Business Wales, an arms-length Welsh Government and EU-funded advice service which is able to offer advice and financing for general business investment. Investments in energy efficient processes and general sustainability are eligible. In Northern Ireland, Invest NI is able to offer tailored support and advice through their Energy and Efficiency team, including funded sustainability reports and technical audits which can provide recommendations on energy, heat, waste and waster savings, signposting to further support, resource matching services and grant funding. A Resource Efficiency Capital Grant of up to £50,000 is available to help businesses invest in energy saving equipment that will drive productivity.

At the local level a number of councils operate networks or offer guidance to SMEs to strengthen their business and move towards greener modes of operation. An excellent example is the Coventry and Warwickshire Green Business Programme which provides SMEs with free access to the local Green Business Network, events and workshops as well as access to free audits and energy and resource efficiency grants. This scheme forms one part of a patchwork of support programmes, funded by the European Regional Development Fund (ERDF), which have been the major funding route by which UK Government has provided SME decarbonisation and energy efficiency support. In the UK, the ERDF Operational Programme is written by The Department for Levelling Up, Housing and Communities and its predecessor departments. Decisions about funding specific local projects is devolved to Wales, Scotland, and Northern Ireland, and in England, to Local Enterprise Partnerships. ERDF funded SME decarbonisation projects often involve: working with a local university to provide technical expertise; a combination of financial and non-financial support for the SMEs to improve energy and resource efficiency (including free energy audits); a sectoral focus, usually on a business sector concentrated in the region concerned. Projects have focused on decarbonising the SME's core operations, developing innovative low carbon goods and services, or a combination of the two. The future of these programmes is less certain now that ERDF funding is winding down in the UK post-Brexit and the UK government's follow on programme, the UK Shared Prosperity Fund, appears to have less of a focus on decarbonisation and energy efficiency.

The other non-energy supporting mechanisms identifiable in the UK are regulations, standards and strategies. While some national plans and regulations in the UK impact SMES, there are no regulations or strategies which apply exclusively to SMEs, with these policy instruments typically covering a wide range of stakeholders.

Over the COVID-19 pandemic, SMEs have been able to access general funding support to mitigate the impacts of lockdowns and reduced trade. Some of measures included the UK Government furlough scheme which paid 80% of employee's wages, Business Interruption Loans, business rates relief and the option to defer tax payments. This generalised support for all businesses helped to prevent very high numbers failing and was a trend that was largely repeated across the EU. However, many of these support mechanisms have since been scaled back.

Moreover, many public and privately-funded schemes offered audits and financial support for energy efficiency alongside support for resource efficiency and renewable generation projects. Many of these schemes were also interested in the possibility of using digitalisation and flexibility as ways of improving energy efficiency and reducing bills.

As well as the avenues of support open to SMEs from the programmes described above we found a number of other energy and non-energy schemes of interest to SMEs. The range of digital tools available to SMEs in different sectors to help benchmark their business and its energy use and produce retrofit business cases was significant and growing. Many of these projects had received UK Government innovation funding to pilot these approaches.

At the wider scale, SMEs in the UK will increasingly have to interact with businesses that must comply with UK rather than EU regulations (or, indeed, both UK and EU regulations) around energy and energy efficiency. We have already discussed the downstream impact on SMEs of larger enterprises needing to comply with ESOS regulations and similar impacts are likely to be felt as a result of the planned UK energy-related product legislation which replaces the European Ecodesign Directive (European Commission, 2009) and Energy Labelling Regulation (European Commission, 2017) as well as a number of product-specific regulations following the UK's official exit from the EU in January 2021. The direction of travel was recently signaled in the UK Government's Energy-Related Products Policy Framework (BEIS, 2021a) which sets out the Government's ambition to go further and faster than the relevant EU regulations on energy and resource efficiency standards. For SMEs this will mean using and producing goods that are more energy efficient from the mid-2020s. It is not yet clear whether we will see continued divergence from EU regulations in other areas but this trajectory will be of interest to SMEs.

Energy efficiency support for SMEs

Delving deeper into the support on offer to SMEs to become more energy efficient, in the UK we see national policies that effect SMEs, although not specifically targeted at this sector, for example the smart metering roll out, climate change agreements and minimum energy efficiency standards for buildings. The supporting mechanism that focuses on SME support, the Boosting Access to SME Energy Efficiency project, indirectly benefits the sector, by funding innovation projects which create a competitive market servicing smaller enterprises, rather than funding SME programmes directly. This indicates a preference for developing support mechanisms through the private sector, rather than through publicly funded schemes.

National strategies

In October 2021, the UK government published the Net Zero Strategy, which gives an overview of plans to reduce carbon emissions to 'net zero' by the year 2050 and reduce the country's reliance on fossil fuels. The strategy acknowledges the important role businesses will play in meeting the climate targets. In terms of direct support for SMEs, the strategy doesn't present concrete plans (a criticism generally leveled at the strategy), but indicates that the UK government is considering a digital advice service for businesses, with advice on how to achieve net zero and funding options.

In the same month, the UK government also published the Heat and Building Strategy, which outlines plans to decarbonise the built environment and foresees a reduction in energy consumption in commercial and industrial buildings by 2030. The strategy emphasizes the importance of increasing energy efficiency and identifies heat pumps as the primary means of decarbonising heat in the UK. The strategy also focuses on developing the market for low-carbon heat in order to bring down the cost of technologies such as heat pumps, hence why it announced funding for innovation projects that reduce the upfront cost of heat pump technologies. In way of direct support for businesses, the Boiler Upgrade Scheme offers owners of small non-domestic properties, in England and Wales, a grant towards the installation of a low carbon heating system, such as heat pumps. The scheme is due to run from 2022 to 2025. In Scotland, the Scottish government published the Heating in Buildings Strategy (October 2021) in which they outlined plans to support the decarbonisation of businesses

by offering SMEs an advice service which will provide guidance on energy efficiency and low carbon heating to businesses based in Scotland. This has now launched as Business Energy Scotland. They also plan to continue offering SMEs affordable loans and grants towards investments in energy efficiency and renewable technologies, through existing schemes (SME Loan scheme).

Smart metering

The UK’s Department for Business, Energy and Industrial Strategy (BEIS) and energy regulator Ofgem are leading the roll out of smart meters as part of the country’s industrial strategy and time of use tariffs are expected to deliver cost savings to businesses. The rollout aims to improve the energy systems flexibility and encourage energy efficiency. Over two million non-domestic sites were due to receive a smart meter, as part of the national roll out. The majority of these non-domestic sites are microbusinesses and SMEs. As of June 2021, 1.1. million smart meters are operational in smaller non-domestic sites, this is 42% of all non-domestic meters that are in operation.

Climate Change Agreements

Climate Change Agreements are a scheme run by the Department of Business, Energy and Industrial Strategy, where businesses can choose to enter a voluntary agreement to reduce their operational energy use and carbon emissions, in exchange for reductions in tax. Participating businesses which comply with the scheme requirements receive a discount on the Climate Change Levy, which is a tax applied to energy bills. Businesses that consume less than 33kWh electricity and/or 145kWh gas per day are exempt from this levy.

The scheme has been in operation from 2013 till present. Participating businesses are required to meet sector-specific carbon reduction targets, which are measured against a base year for that sector. The businesses that meet their targets, are eligible for the tax reduction and those who do not meet the targets can either carry over surplus reductions from previous reporting periods or pay a fee per tCO2e.

The results published by the Department for Business, Energy and Industrial Strategy (see Table 1), show that the carbon savings that have been adjusted for changes in throughput, have exceeded targets since the scheme began. During 2019 to 2020, the scheme showed a high level of compliance with the reporting requirements, with 99% submitting their report on time. From those who submitted the report, 47% met or exceeded their carbon reduction targets.

Table 1 - Target and actual emissions reductions in UK (2013-2020). Adjusted changes in emissions (million tonnes CO2e), Department for Business, Energy and Industrial Strategy (2021)

Target period	Target period 1 (2013-2014)	Target period 2 (2015-2016)	Target period 3 (2017-2018)	Target period 4 (2019 – 2020)
Target emissions reduction	3.6	4.6	5.9	6.4
Actual reduction in emissions	5.6	7.8	9.0	9.3

Data showing the number of SMEs who have entered into these voluntary agreements isn’t available, however the scheme evaluation (BEIS, 2020) implies that smaller firms are less likely to participate in the scheme. It is believed that perceptions around SMEs’ limited capacity to implement energy efficiency measures could prove to be barriers. While the gain from the tax reduction could be low compared to the administrative burden.

Minimum Energy Efficiency Standards for private rented properties

The Department for Business, Energy and Industrial Strategy implements a minimum energy efficiency standards scheme (MEES) for private rented properties, including commercial properties. The Energy Efficiency (Private Rented Property) Regulations 2015 established a minimum level of energy efficiency for privately rented property in England and Wales. Landlords of privately rented property are required to ensure that their properties reach at least an Energy Performance Certificate (EPC) rating of E before granting a new tenancy to new or existing tenants. There are indications that the minimum rating may be raised further to an EPC rating of B, to contribute to carbon reduction targets by 2030. Research on the impact of the MEES scheme to date showed that the landlord and tenant organisations believe that the scheme has raised awareness of energy efficiency and the energy performance of commercial properties (BEIS, 2021b).

Boosting Access to SME Energy Efficiency

Boosting Access to SME Energy Efficiency (BASEE) is a programme led by the Department for Business, Energy and Industrial Strategy, supporting the development of new commercial services to help SMEs improve their energy efficiency. The programme offers funding to projects which develop business models that remove barriers for SMEs and make it easier for them to implement energy efficiency measures. BASEE funded projects are tasked with identifying ways of reducing upfront capital costs and transaction costs for SMEs and proposing innovative ways of accessing finance. As of March 2020, eight projects have been funded through the scheme.

These projects are trialing approaches such as online tools that offer bespoke advice and guidance and one-stop-shop services. These services guide SMEs from the initial stages of contemplating investing in energy efficiency improvements by offering advice and guidance and support them with the practical aspects of installing measures and monitoring their impact.

Most of the projects make use of online platforms to offer tailored advice, for example, the online platform DEEP which generates a list of bespoke recommendations, either structural or behavioural, based on the businesses' energy consumption and energy performance data. Other projects are sector-specific, for example, Fluttr is an online application that supports SMEs in the hospitality sector, by connecting them to contractors and financing options, to make energy efficiency improvements.

Energy Auditing support for SMEs

The UK has established a mandatory audit programme, the Energy Savings Opportunity Scheme (ESOS), for large enterprises to comply with Art. 8 of the Energy Efficiency Directive, however SMEs are exempt from having to perform audits (though a recent consultation did propose extending the scheme to medium-sized businesses, a final decision is pending). However, some SMEs, which form part of larger enterprises and their supply chains, could be indirectly impacted, since they may be asked to adhere more closely to the requirements set out by ESOS and other similar regulations. Although audits are not mandated in the UK for SMEs, they are encouraged through various government initiatives, however this is limited to publishing guideline documents, for example the SME Guide to Energy Efficiency published in 2015 which offer information on the benefits of energy efficiency and the areas where improvements can be made (lighting, heating systems etc.).

There is an initiative in the private sector supporting SMEs to perform audits, called Virtual Energy Audits. The service started in 2020 by a major energy supplier in the UK, British Gas, which supplies homes and businesses. Virtual Energy Audits offers businesses free, web-based audits to identify energy-saving opportunities that businesses may not be aware of.

When evaluating the availability of energy audits to SMEs it was welcome to see that many were intrinsically linked to financial support for energy efficiency measures. This was true of some local authority-level programmes such as DE-Carbonise Derby (Derby City Council, 2021), which is part-funded by the European

Regional Development Fund and local councils, offered free energy audits as well as allowing SMEs to bid for grant funding for energy improvements of between £1,000 and £20,000 which covers 40% of the costs.

Access to both audits and energy efficiency programmes was more common in national schemes run by both national governments and the private sector. In terms of national programmes, Scottish Government funds Energy Saving Trust through Business Energy Scotland to deliver the SME Loan Scheme which offers free energy efficiency assessments followed by loans of up to £100,000 with 30% cashback available up to a maximum of £10,000 for energy efficiency measures. Similarly, until March 2021 Carbon Trust were offering SMEs in Wales interest-free loans of between £3,000 and £200,000 through the Welsh Energy Efficiency Loan Fund (Carbon Trust, 2021b) which was funded by Welsh Government and Business Wales. It is important to note that both of these schemes would also offer funding for renewable energy generation as well as energy efficiency improvements.

In terms of privately-run schemes linking energy audits to energy efficiency support Royal Bank of Scotland previously offered audits and loan funding to SMEs through their Mentor programme (RBS, 2017). The Mentor Energy Audit considered energy efficiency improvements, energy tariff management and renewable generation with loans of £25,000 to £200,000 available to help implement the recommendations of the audit.

It appears from the review of programmes undertaken that many smaller-scale programmes, such as those which only offer high-level auditing or benchmarking (ie Carbon Trust Energy Benchmark Tool for SMEs (Carbon Trust, 2021a) and the Fluttr app (Fluttr, 2021) for hospitality businesses), would benefit from being able to refer SME clients to national funding programmes for energy efficiency improvements as many had sufficient funding to offer energy audits but weren't able to offer funding support to help implement the audit recommendations or signpost to other suitable funding streams.

Conclusions

The review of the policies and programmes which impact SMEs in terms of audits and energy efficiency showed that it is a challenge to engage with smaller companies, which often do not have the time or resources to invest in energy efficiency and audits. SMEs will be required to make considerable investments in energy efficiency and low carbon heat sources, in order for the UK to meet its decarbonisation targets by 2050. Overall, there is acknowledgement that SMEs will need support to achieve this goal and their role in achieving the net zero target is important. Although there is high level commitment to support SMEs with decarbonisation on a national level, the direct support programmes in the UK tend to be localised. They are delivered by local or devolved governments, or the private sector and are only available to a small segment of the SME population.

The most effective programmes in the UK have been those which combine support types and offer financing alongside advice and guidance. They provide support for SMEs during the application process for support instruments, during the installation of measures and post-installation follow-up, to ensure SMEs stay engaged throughout the process. There have been good examples of one-stop shops which offer audits by qualified energy advisers alongside affordable financing options to implement the recommended measures and offer capacity building. Successful programmes, also limit the administrative burden for SMEs for applying for financial investments and do not have complex application processes with strict qualifying criteria.

The support for SMEs in the UK has not been sector specific, most programmes and support services are open to SMEs in all sectors. This approach has limitations, especially for harder to reach SMEs that face barriers which are specific to their industry, building type or operation. Tailoring the support to the SME sector and involving sector partners in the design and delivery of policies and support programmes could result in more action and implementation of audits and energy efficiency measures. Furthermore, it is challenging for SMEs to find energy auditors who are experienced in their sector and can provide clear and actionable recommendations.

Raising awareness among SMEs of the importance of energy efficiency and the key role they will play in meeting long-term decarbonisation targets is also challenging, with many SMEs in the UK not motivated to take action. In the UK, the advice services and support programmes on offer have helped increase the understanding of energy efficiency among SMEs, however these programmes are only delivered on a local or regional level, so not all SMEs have access to this type of support.

Finally, although monitoring of policies and programmes which impact SMEs, does happen, this isn't always done in a consistent way making it difficult to compare the impact they have. Some evaluations group businesses differently making it challenging to disaggregate the impact that policies and programmes have on SMEs specifically. Making the monitoring of programmes more transparent and consistent is important for a thorough analysis of the barriers and the success factors and a comparisons between policies and programmes to be performed.

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