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Industrial heat use and the Heat Strategy

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Industrial heat use and the Heat Strategy



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THE ISSUES OF EFFICIENT HEAT AND reducing emissions from the generation of heat are rapidly moving up the political agenda. Industry needs to watch these developments closely and be prepared. Six industry sectors, including chemicals, oil refining, food and drink, basic metals, pulp and paper and non-metallic minerals (including ceramics, cement and glass) are singled out as target sectors by the government's heat strategy, *The Future of Heating: Meeting the Challenge* (the Heat Strategy) published in March 2013, but other industry sectors should also be concerned.

Businesses could be forgiven for missing or ignoring the Heat Strategy, after all it is just another paper linked to carbon and energy reduction targets, and businesses in the UK have been bombarded with these over the last five to ten years. However, to ignore the future impact of the policies outlined in the Heat Strategy would be a mistake, as it flags the prospect of the introduction of significant future regulation and financial mechanisms. While UK industry is generally taking the environmental and energy efficiency debate seriously, it has to concentrate on a whole host of different pressures, not least of which is survival and competitiveness in a global recession. However, longer term energy efficiency is sensible and will aid competitiveness.

In-house lawyers, particularly those working in the six industries specifically mentioned in the Heat Strategy, will have a big role to play. It is highly likely that regulation around heat and emissions will increase, as we have seen in many other areas including electricity and emissions legislation. Industry will need to factor this in to business/investment decisions, including whether to replace old plant or heat supply contracts.

It has been estimated by the Department of Energy and Climate Change (DECC) that £32bn a year is spent on heating in the UK. Heating is responsible for approximately one third of the UK's greenhouse emissions, with 80% of that heating produced from combustion of fossil fuels. If the UK is going to meet its renewable energy and emissions targets, and reduce its dependency on imported fossil fuels, it is clear that concerted action is required to ensure that heat is generated, distributed

and used more efficiently. The key concern for industry is that there is a growing feeling in the political and wider sphere that the dramatic change required in the way we deal with industrial heating is happening too slowly. There are strong indications that the government may, in the future, consider that limiting inefficient heat use through the use of disincentives and/or increased regulation is the only way to ensure industry takes the action required to meet targets.

It is imperative for industry to not only be aware of what is available to encourage the generation and use of low carbon heat, but also the inevitable impending tightening of regulation in this area. Tighter regulation will lead to an increase in compliance requirements, and therefore impact on budgets and profitability. The heating bill will likely always increase, but the heat inefficiency bill may have greater consequences.

THE HEAT STRATEGY

The Heat Strategy was published by DECC on 26 March 2013 and outlines the ways in which the outcomes of the heat framework ('The Future of Heating: a strategic Framework for Low Carbon Heat in the UK', March 2012) will be implemented by DECC and the Department for Business Innovation and Skills (BIS). The Heat Strategy breaks down the proposed action into four distinct, but interlinked chapters:

- i) efficient low carbon heat in industry;
- ii) heat networks;
- iii) heat and cooling for buildings; and
- iv) grids and infrastructure.

Chapter 1 is the most relevant to industry, but the remaining three chapters have a potential impact on industrial heat use, primarily regarding the use of recovered industrial heat in heat networks and for heating buildings.

The Heat Strategy suggests that industry accounts for a quarter of the UK's carbon emissions, and that two thirds of heat demand is concentrated in the six industry sectors mentioned above. The government considers that the three key ways in which emissions from industrial heat can be

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reduced are through the use of more energy-efficient processes and equipment, the use of lower-carbon fuels such as sustainable biomass and refuse-derived fuel and carbon capture and storage (CCS).

The Heat Strategy also recognises that various forms of combined heat and power (CHP) plants have an important role to play, due to their efficiency. In the short term, development of natural gas CHP plants will be required to fill the impending energy gap. However, the government has indicated that, longer term, natural gas CHP plants will need to be retrofitted with CCS or replaced by lower-carbon CHP plants that meet certain sustainability standards. We have already seen evidence of the support for CHP plants in the form of a CHP plant-specific renewable heat incentive (RHI) scheme tariff, proposed in the July 2012 consultation (see below). Industries considering installing CHP plants to supply on-site heat and power would be well advised to keep up to date with developments and familiarise themselves with the regulatory requirements for CHP plants to qualify.

To seek to improve the efficient use of heat in industry, the Heat Strategy charges DECC and BIS to take defined action in five workstreams:

- 1) identifying how to support the development of industrial CCS;
- 2) working with the most heat and carbon intensive industry sectors to develop 'decarbonisation road maps';
- 3) assessing the feasibility of using recovered heat as an energy source and using the results of such assessment to examine the possibility of incentivising

recovered heat as part of the scheduled review of the RHI scheme in 2014;

- 4) developing support for natural gas CHP, subject to it not replacing low-carbon generation; and
- 5) exploring the use of European regional development funding for CHP plants and heat recovery projects.

These actions suggest that a collaborative approach will be taken to address the issues, with government, industry and the public working together to find a mutually beneficial way to a more efficient heat future. However, alongside this approach, there seems to be a more direct message; that industry should be prepared to face a potentially more stringent regulatory regime, which will work hand in hand with incentive schemes to increase efficient heat generation and use. By way of example, DECC has been specifically tasked with exploring the contribution that tighter standards on heating systems and building emissions could make to reaching the UK's emissions targets.

Throughout the Heat Strategy, significant emphasis is placed on the importance of the role the RHI scheme has played, and must continue to play, in encouraging the generation of renewable and low-carbon heat. The Heat Strategy requires DECC to ensure that the scheduled 2014 review of the RHI scheme delivers a number of its policies. It is clear the importance the government attaches to the success of the RHI scheme in ensuring the UK achieves its renewable energy and emissions targets, and delivers its vision on heat policy.

INCENTIVISING GENERATION OF LOW-CARBON HEAT

The RHI scheme is the primary incentive scheme targeted specifically to promote

installations delivering low-carbon heat. When it launched, the government heralded the RHI scheme as the first scheme of its type in the world, and highlighted its key importance in cutting emissions and promoting the uptake of renewable heating. The RHI scheme has seen reasonable uptake but has had a number of teething problems, including issues around heat metering. Biomass installations have eclipsed other technologies in a number of installations that have been accredited to date, and uptake as a whole has been lower than expected. Also, a 'standby mechanism for budget management' was implemented, which provided for the scheme to be closed to new applicants where expenditure thresholds were met. These issues have been, and are being, addressed by a number of consultations and amendments to the Renewable Heat Incentive Scheme Regulations 2010, which introduced the RHI scheme.

The draft regulations currently going through the parliamentary scrutiny process seek to control deployment of RHI eligible technologies by decreasing tariffs where expenditure thresholds (progress against which will be published by Ofgem) are met. The complex mechanism is intended to ensure that a balanced mix of technologies are accredited, and to prevent the issues seen with the feed-in tariff (FIT) regime for small-scale electricity generation, which led to the dramatic cutting of FIT levels as a result of an oversubscription for certain technologies. It is hoped the revised degression mechanism will give more certainty to developers and investors on their likely returns.

The latest consultation on the RHI scheme ('Renewable Heat Incentive: Expanding the Non-Domestic Scheme', July 2012) closed in December 2012 and the government's response is due in the summer of 2013, with the changes expected to take effect in spring 2014. The consultation proposes a number of changes to the RHI scheme, including an increase in the number of technologies that can be accredited, expansion of support for certain technologies, and a new specific CHP plant tariff of 4.1p/kilowatt-hour thermal (kWth) (subject to the installation meeting the CHP quality assurance requirements). This tariff is significantly higher than the current tariff

for large (more than 1000 kWth) biomass installations, and indicates government support for CHP. The proposed expansion of the RHI scheme will allow industry wider access to heating technologies that might have previously been uneconomic or not feasible. Where heat using industries have new or expanding heat requirements, they would be well advised to keep up to date with the proposals.

In tandem with support under the RHI scheme, we are starting to see a shift to a two-pronged approach of further incentivising low-carbon heat generation, subject to compliance with certain efficiency requirements. The current consultation on the RHI scheme proposes introducing such requirements as a condition of accreditation. It is possible that we will see more of the approach now in place for solar installations under the FIT scheme, whereby buildings using electricity generated by solar installations must have an energy performance certificate rating of D or better in order to qualify for higher tariffs.

This initial shift towards looking at energy/heat efficiency could be the start of a more stringent and wide-ranging regulatory regime intended to combat inefficient heat use, which will oblige industrial users and generators of heat to install efficiency measures, potentially in the form of expensive retrofits. This approach is being led, at least in part, at a European level through the implementation of the Energy Efficiency Directive (Directive 2012/27/EU on energy efficiency) (the EED).

IMPROVING HEAT EFFICIENCY

It is clear that generation of low-carbon heat is only half of the issue. The government is also concerned with ensuring that the heat generated and used for space heating and industrial processes is used efficiently, and wasted heat is minimised. The Heat Strategy details a significant amount of work that will be carried out by DECC and BIS on heat, which is focused on improving heat efficiency issues. Further pressure to take action on energy

efficiency is being exerted through the implementation of the EED, which came into force on 4 December 2012.

The EED has been developed as a result of the European Commission estimating that the EU will not meet its 20% energy consumption reduction target by 2020. It introduces measures for the promotion of energy efficiency in the EU, covering heat and electricity generation, delivery and use. Member states are obliged to implement the EED by 5 June 2014. Much of the EED's provisions are focused on public bodies and reporting against indicative national energy efficiency targets, which must be submitted by member states. However, most of the measures will, either directly or indirectly, have an impact on industry.

All large enterprises will be obliged to carry out energy audits every four years, and small and medium enterprises will be encouraged to do the same with appropriate support. Member states are encouraged to put in place incentives for the implementation of recommendations from those energy audits. Member states are also required to set up energy efficiency obligation schemes to ensure that certain energy companies achieve energy savings targets, or instead target energy users with measures to achieve equivalent savings. The EED goes further in suggesting possible measures that member states could use to achieve energy savings. These include energy or carbon dioxide taxes to reduce consumption and/or increase efficiency.

The detail of the measures the government will adopt in order to implement the EED has not yet been developed. However, those measures will be aimed at promoting a greater focus on energy efficiency for all businesses. Compliance will inevitably carry cost implications and energy intensive industries are likely to be the hardest hit.

CONCLUSION

Sustainable and efficient generation and use of heat in industry is vitally important for the government to achieve emission

reductions targets. To date, government has sought to incentivise sustainable and efficient heat generation and use through the centrally funded RHI scheme and other, similar incentive schemes. However, evidence suggests that incentivisation has not had the significant effect that was hoped for in changing the way industry thinks about heat.

Economic survival of businesses is all the more challenging in the current economic conditions. There has been significant attention on issues around energy regulation, most recently with the carbon markets, which are in a state of flux and uncertainty. Against this general backdrop of uncertainty, it is tempting for in-house lawyers to wait and concentrate on day-to-day issues, but to do so is unwise. As regulation continues to build, in-house lawyers will play an increasingly useful role for their businesses by interpreting and advising on rules which will have practical impact and cost implications for their businesses.

It is clear that a balance must be struck between the need to apply pressure on industry to consider more seriously the issue of efficient heat generation and use, and imposing further regulatory, and therefore cost, burdens in difficult economic conditions. However, the Heat Strategy makes clear that the government is moving to encourage industry to take action. In future, this encouragement is inevitably coming in the form of tighter heat/energy-specific regulation, to force industry to change the way it views the generation, distribution and use of heat. Companies, particularly in the industries that have been specifically mentioned in the Heat Strategy, should remain vigilant to the risk of tighter regulatory control.

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