# Response to Labour Party's Plans for Energy Efficiency by the Chartered Institution of Building Services Engineers (CIBSE)

## Executive Summary

CIBSE is pleased to see the focus on energy efficiency in the commercial sector set out in section 4 of the consultation paper. Energy is a scarce resource, just like any other. Yet the attitude of both consumers and businesses to wasting energy appears to be quite unlike most other forms of waste. There are notable exceptions in the business sector, which show that better energy management can significantly reduce demand in a cost effective way. If the UK is to benefit from secure energy supply at stable prices then there must be a marked shift in approach to the efficient use of energy, and, indeed, to avoiding energy use wherever possible.

Stable future UK energy supplies require a systems based approach which incorporates decarbonisation of supplies that is made affordable by reduced energy demand. Reduced demand is often the cost effective and quicker solution, but is a challenge with multiple actors and stakeholders, limited business models, few industrial champions and a complex policy landscape. There are significant gaps between the various departmental responsibilities, there are overlaps in existing policies and far too little attention paid to real measured energy consumption. There is also a problem with limited compliance with existing measures, particularly the Energy Performance of Buildings Regulations. Reducing demand is currently the poor relation of decarbonisation, but is essential to meet our targets.

Energy efficiency is likely to be a very important policy in the near future, as it is the only way to deliver significant reductions in demand to match possible reductions in supply capacity. Quite simply, we cannot now deliver new capacity fast enough to meet current levels of demand. Demand reduction through cost effective energy efficiency measures, both technical and behavioural, are the quickest most cost effective way forward for the UK.

This response summarises CIBSE's thoughts on this topic, and references existing material already available. It focusses on commercial buildings, since this is a more complex area in which CIBSE members have considerable expertise, and provide a significant proportion of the professionals providing services in this sector.

The Chartered Institution of Building Services Engineers (CIBSE) is the primary professional body for the engineers who design, install and operate the energy using systems, both mechanical and electrical, which are used in buildings. Our members therefore have a pervasive involvement in the use of energy in buildings in the UK.

The Institution is the primary source of professional guidance for the building services sector on the design and installation of energy efficient building services systems to deliver healthy and effective building performance. CIBSE publishes Guidance and Codes which provide best practice advice and are internationally recognised as authoritative.

This response provides a brief overview. Additional detail is available if this would be helpful. For this, please contact CIBSE Technical Director, Dr Hywel Davies, hdavies@cibse.org, mobile 07590 047086.

**Existing policy**

1. Reviewing the existing policy mix relating to energy efficiency reveals an unnecessarily complex system. This has been shown by work undertaken this year by Deloitte for the Investment Property Fund, which has looked in detail at existing policies relating to energy efficiency and carbon and greenhouse gas reporting[1]. For buildings specifically there are at least 15 policies or legislative instruments which cover energy, carbon and greenhouse gas use by business. These are summarised in Table 1.

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| 1 | Building Regulations |
| 2 | CRC Energy Efficiency Scheme (CRC), |
| 3 | Climate Change Agreements & Climate Change Levy |
| 4 | Energy Performance Certificates (EPCs) |
| 5 | Air conditioning inspections |
| 6 | Display Energy Certificates (DECs) |
| 7 | F-Gas related requirements |
| 8 | Green Deal |
| 9 | Smart Meters |
| 10 | Enhanced Capital Allowances (ECAs) |
| 11 | EU minimum standards and energy performance labelling |
| 12 | Zero Carbon Homes, BREEAM |
| 13 | Mandatory Greenhouse Gas reporting |
| 14 | ESOS (Energy Savings Opportunity Scheme) |
| 15 | Minimum Energy Performance Standards |

**Table 1: current regulations and policies relating to energy, carbon and greenhouse gases in buildings**

2. Complexity causes confusion and uncertainty, increases risk and cost and creates gaming options. It is hugely difficult to manage because of the complex and overlapping mix of legislation and enforcement. We urgently need simplification of existing policy instruments. ESOS, CRC and Mandatory Greenhouse Gas reporting all need very similar information to be collected several times and reported in subtly different ways, creating expense without additional value across the various schemes. We need simpler metrics and to use that information to address the various information, reporting and compliance needs.

3. This needs resolution before we add any more policy measures, and it should be an urgent priority for the Energy Efficiency Deployment Office (EEDO) to carry out a comprehensive review, in close partnership with stakeholders, and with the full co-operation of other government departments.

4. Resolving the current policy mix is an essential precursor to setting out a coherent long term policy, to address Q22. This will also have an impact on reporting requirements (Q24) and awareness raising (Q25), where a simplified policy landscape will be easier to communicate with a wider audience.

5. It is important to take account of existing industry support for energy efficiency, as set out in the CBI report, "Shining a Light"[2], published in September 2013, which set out the case for a significant effort to improve energy efficiency in the commercial sector.

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[1] Deloitte LLP report for Investment Property Fund, accessed at http://www.bpf.org.uk/en/files/bpf_documents/sustainability/GPA_Carbon_Penalties__Incentives_-_MAIN_REPORT_PUBLISHED_18.06.2014_-_with_foreword.pdf on 12th December 2014

[2] "Shining a Light - Uncovering the business energy efficiency opportunity" CBI September 2013. Accessed from http://www.cbi.org.uk/media/934998/shining_a_light_-_uncovering_the_business_energy_efficiency_opportunity_cbi_report_aug_2013_screen.pdf

## Addressing enforcement and compliance

5. There is a need to ensure that whatever regulations are adopted, there is a reasonable, proportionate and realistic enforcement model. The present situation with the Energy Performance of Buildings Regulations is a serious concern, which threatens to undermine other policies, in particular the proposed Minimum Energy Performance Standards[3].

6. Compliance with the EPB Regulations is hard to ascertain (for the reasons set out in the MEPS response), and also as described in an article for CIBSE Journal in November 2013, dealing with the decision by the coalition government to "compensate" Landmark Information Group for a reduced level of lodgement of energy performance certificates. Although not documented, there is also a serious issue with air conditioning inspections, where the published lodgement rates of 12,000 a year are only sufficient for 60,000 installed air conditioning units over 12kW rated output in the whole of England and Wales to be compliant with the regulations. The most conservative estimates are that there are 300,000 such units, although there could be two and a half times that figure in practice. In other words, the best compliance rate is 20%, though it could be as bad as 8%.

7. As pointed out in the Journal, this turns the regulations into a tax on the compliant and law abiding, which cannot be considered "smart regulation" by any definition of the term. Worse still for the next administration, it is hard to argue that these levels of compliance are effective, reasonable and proportionate, as required by the Energy Performance of Buildings Directive, Article 27, on enforcement. This also needs reviewing and some hard decisions about whether to enforce the Directive requirements properly, taking into account the impact of EPC compliance on MEPS (under the 2011 Energy Act a building which is without an EPC is not in scope of MEPS).

8. The current view that regulation is almost always bad, and a burden on industry, is not borne out by a study of the history of energy efficiency legislation. The introduction of condensing boilers clearly shows how a simple measure with clear and obvious enforcement and preparation of the skills base can be exceptionally effective.

9. Condensing boilers were used extensively in Europe in the 1980s. From 1990 to 2005 they gained 1% market share per annum in the UK. When Building Regulations were introduced to require them in most cases, market share rose from 15% to 85% in six months. Energy consumption statistics clearly show the impact. We need to understand and recognise the role and potential benefits of well designed and implemented regulation.

10. To address MEPS, as requested in Q23, we believe that some serious work is needed on the underlying issue around EPCs before MEPS can be successfully implemented. We also recommend that serious thought is given to adopting the same approach to domestic and non-domestic buildings. This was done for the EPBD in 2007. Whilst the reasons can be understood, it has led to numerous unintended consequences because of the issues around ownership, tenure and split incentives in the commercial sector. For MEPS there is a serious need to consider these issues carefully when designing the detailed regulations. This has proved effective for the development of the Energy Savings Opportunity Scheme, where industry has had significant input to the scheme design and delivery.

## Building Regulations

11. CIBSE supports the general approach in paragraphs 4.7 and 4.8. There needs to be a clear pathway forward for the next several years, with a firm EU deadline for "nearly zero energy" buildings from 2021 for private sector buildings and 2019 for the public sector.

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[3] CIBSE response to DECC consultation on MEPS, September 2014, accessed at http://www.cibse.org/getmedia/ac022715-c6d7-4d0a-9b15-34bd2ac34111/164_Non-Domestic-Minimum-Energy-Efficiency-Standards-CIBSE-response.pdf.aspx on 12th December 2014

12. There is, however, an urgent need to reconcile the UK “zero carbon” policy, based on “Allowable Solutions” with the EU “nearly zero energy” policy. This describes a ‘nearly zero-energy building’ as “a building that has a very high energy performance, as determined in accordance with Annex I. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby”.

13. This raises the question of whether the EU will consider that the UK zero carbon policy is also a “nearly zero energy” policy. Clarity on this is essential to prevent the UK heading off down a cul-de-sac, at considerable potential expense.

14. Whatever the outcome, there is significant detailed work to be done on the next stage of development of Part L of the Building Regulations for both new buildings, but also for the existing stock.

## Leadership in the Public Sector

15. Delivering our targets will require strong political leadership, sustained policies and much hard work, and not just in the public sector. Proper implementation of existing policies such as Display Energy Certificates and air conditioning inspections is needed. This means not just obtaining the certificates and reports, but also the accompanying recommendations for improvement that come with them, and then taking the recommended actions to change behaviour and and implement simple cost effective energy savings measures. It also requires leadership from the top which views wasting energy and therefore wasting

16. The old message that you cannot manage what you cannot measure applies here. Public sector bodies need to measure energy use, simply, and then to manage it. We need to create a far better understanding that energy is measured in kilowatt hours, and that the more kilowatt hours are used the higher the bill. We need to make “kWh” as understandable as “mpg”. Money spent on energy cannot be spent on public sector workers, or on medicines, or textbooks, or care, or other forms of public service resource. We need basic energy efficiency literacy in the public sector to deliver much greater understanding of energy use, and how to reduce it without compromising user comfort.

17. To address Q27, this needs little technology, it needs cultural change, leadership, focus and employee awareness and encouragement to do the right things to reduce energy use without compromising the performance of the building and the services being provided in it.

## Summary

18. Industry cannot lead the way without reasonable policy certainty, rather than ‘U’ turns or incremental policy ‘tinkering’. Early adopters of various energy demand innovations, such as Code Level 6 homes, have lost out when policy has changed, often at short notice. Whilst the supply side has multi-billion multi-year contracts, the incentive regime for the microgeneration industry is reviewed every few months and incentives cut. None of this breeds investor confidence.

19. The transition to a low carbon, low energy demand future will be uncomfortable and expensive but the long term rewards are very significant, and the costs of inaction will be even greater.