

Carbon Penalties & Incentives

A review of policy effectiveness for carbon reduction and energy efficiency in the commercial buildings sector



Executive Summary

- 1 This study uses a combination of primary survey, literature review and expert stakeholder dialogue to assess the effectiveness of a range of current and pending policy instruments deemed to have a direct or indirect effect on energy and carbon performance in the UK commercial buildings sector. In addition to consideration of the instruments on an individual basis, the assessment of the functionality and effectiveness of the policy framework as a whole is a notable innovation of the study.

Key Findings

- 2 It has been demonstrated that, in the eyes of many actors with interests in the commercial buildings sector, there are **significant limitations within the existing framework of energy and carbon policy instruments**. However, there are a number of **positive attributes too that can be developed further to improve the effectiveness of the policy framework as a whole**.
- 3 Our research has shown that the current policy framework has the following notable features:
 - Instruments are not distributed evenly across the commercial buildings' lifecycle, with the Occupation/Use phase subject to the greatest number of obligations, incentives and penalties. By contrast, there are relatively few instruments which focus specifically on the transactional or financing stages of the lifecycle. This arguably **suppresses the potential impact of the policy framework on market demand for energy and carbon efficient buildings**, especially amongst investors and lenders. Early signs suggest that the pending implementation of Minimum Energy Performance Standards has the potential to materially alter this dynamic because of its likely focus on lease transactions as a compliance trigger.
 - The **framework of instruments is almost entirely focused on operational energy and carbon, and almost completely disregards embodied carbon** which, as the operational efficiency of buildings improves, accounts for an ever greater proportion of the total carbon impact of commercial buildings. Whilst there are instruments beyond the scope of this study which might have an effect on the embodied carbon of construction materials and property services, our finding implies that greater policy focus should be devoted to driving down the energy and carbon intensity of the commercial building sector supply chain.
 - The **effectiveness of individual instruments is deemed by market actors to vary considerably**. Interestingly, some of those instruments that are considered to be particularly effective are not specifically intended to deliver energy or carbon reduction outcomes, but may have a vicarious effect in that regard. The Landfill Tax is perhaps the most salient example.
 - Market participants generally view the policy framework as **complex** whilst around half consider it to be of moderate or greater administrative burden.
 - There appears to be a **clear link between policy familiarity and the level of perceived benefit** to the business of market actors. It is widely recognised that lack of awareness continues to be a considerable impediment to low carbon transition and energy efficiency within the sector. This poses a key question about the role of Government and industry groups in communicating with the market on policy expectations and requirements, and promoting the increasingly evidential business case for energy efficient property (see, for example, "The Business Case for Green Building" by the World Green Building Council). This finding also suggests that the industry could fail to appreciate, build upon, or implement an otherwise good policy, simply because it is not widely known.
 - There is a clear trend of **weakening effectiveness of obligations as they move from policy design to implementation**. Particular concerns are noted around inadequate enforcement, incompatibility with the workings of the market, and inadequate integration of penalties and/or incentives to drive compliance. A similar trend is apparent with those instruments that act as direct incentives, albeit less pronounced. Conversely, **penalties are considered to be implemented more effectively**.

- 4 Perhaps above all, the effects of the policy landscape and the individual instruments within it are found to be **highly nuanced, depending on a wide range of building lifecycle, property market and other factors**. In that sense, it seems unlikely that a simple framework of instruments could ever apply effectively to each and every circumstance within the commercial buildings sector. This implies that a degree of policy complexity is, to an extent, inevitable.
- 5 Generally speaking, those **instruments which have a broad impact by amplifying the price of energy consumed are found to be ineffective** in driving energy and/or carbon efficient behaviours and decisions, mainly due to their lack of visibility and the inelasticity of energy demand within the sector. Notable examples of this include the Climate Change Levy and the CRC Energy Efficiency Scheme. Given there are several policies of this type, many of which overlap in scope, there would seem to be an **opportunity for effective rationalisation without detriment to policy objectives**, thereby reducing elements of market friction.
- 6 **Policies which are process-driven without imposing an obligation for action are also found to be comparatively ineffective**, such as Air Conditioning Assessments required under the EU Energy Performance of Buildings Directive. Methods of mandating or strengthening the incentive for action arising from such policies are therefore considered to be important.
- 7 Conversely, **Building Codes, positive financial incentives and choice editing instruments are found to be generally more effective**, as long as they demonstrate adherence to certain pre-conditions of policy effectiveness (see Section 2 of the Main Report). The **effectiveness of such policies can be amplified considerably when bundled into packages**. In particular, bundling policies with an effect throughout the building lifecycle, such as Building Regulations and the forthcoming Energy Savings Opportunity Scheme, could have a significant role to play in bridging the performance gap which commonly exists between the design and post-construction phases.
- 8 It is not possible to be precise about the actual energy and carbon reduction effect of existing policy instruments because there are **major limitations in the current approach to quantifying and monitoring policy impacts**.

Headline Recommendations

- 9 A wide-ranging suite of recommendations are made which should, as far as is practicable, be taken together as a package of interventions. These seek to **simplify complexity, reduce unnecessary instruments through rationalisation, strengthen incentive and penalty effects, and improve the arrangements for impact measurement and monitoring**.
- 10 Specifically, recommendations (more detail on which can be found in the Main Report) are provided with respect to:
 - Addressing the perception of complexity by increasing market participants' familiarity with individual instruments and the framework of policies as a whole, highlighting the role of government, professional institutes and industry bodies in raising awareness and engaging on policy matters on an industry-wide and sub-sector-specific basis.
 - Addressing complexity by removing inadequate or inappropriate metrics through a transparent and ongoing process of review.
 - Organising instruments into related 'bundles' which address key aspects relating to energy and carbon performance of buildings. Specifically, all policies should contain a bundle of measures which ensure the assessment of energy and carbon performance, labelling of that performance against appropriate benchmarks, establishment of minimum performance standards and provision of sanctions for failing to meet that standard.
 - Providing clear signposting of policy trajectory to the owners and users of commercial buildings, including on a policy-specific basis. The evidence contained in tools such as the Green Construction Board Low Carbon Routemap provides a compelling case for these trajectories to be established on an 'upwards only' basis.

- Prioritising policy requirements by identifying which aspects of buildings' performance throughout the lifecycle need to be addressed, and by introducing greater balance into the policy framework between embodied and operational energy and carbon.
- Identifying instruments with limited effectiveness which would not form part of an effective policy bundle that could be reduced in scope or removed. This should run in parallel with focusing on those instrument types which are found to be generally effective such as dynamic and properly enforced standards for new and existing buildings, positive financial incentives for performance ahead of compliance, and continued use of choice-editing policy types to remove inefficient and outmoded products from the marketplace.
- Focusing effective instruments on aspects of the property lifecycle where their cost-effectiveness will be maximised by improving the rigour and transparency of Regulatory Impact Assessments and by improving the flow of bottom-up, sector-specific data to inform the policy-making and implementation process.
- Ensuring a robust and consistently enforced regime for all policies.
- Reducing the amount of change made to instruments for political purposes by transparently prioritising policy effectiveness and market efficiencies, and through greater independent scrutiny.
- Establishing a clear monitoring and scrutiny role for a representative group of policy-makers and commercial building actors, ideally by mandating such a function to an existing body, in order to:
 - Provide an assessment of market opinion of the effectiveness of existing policies (which could be used against official data relating to tco2e of carbon reduction);
 - Provide government with an informed understanding of market conditions within which policy would be made;
 - Advise on the need for new or modified policies in given areas;
 - Advise on how best to co-ordinate or 'bundle' policies; and
 - Identify where policy overlap might enable policies to be reduced in scope or scrapped.

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