

Carbon Penalties & Incentives

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



Editorial Note

This document should be read in conjunction with the Launch Presentation slides from 18 June 2014 and the Carbon Penalties & Incentives Main Report and Appendices, March 2014.

Event Holding Slide [Slide 1]

No text

Presentation Cover Slide [Slide 2]

Good morning everyone, and thank you for your interest in – and in many cases your invaluable input to – this project.

From Deloitte's point of view, it's been a fascinating piece of work to be involved in and the level of engagement from stakeholders across Government and industry has been a real highlight. The comprehensiveness of the Report being launched today is testament to that.

My job this morning is to provide you with the headlines of our research findings, and the key recommendations which we see as critical to future policy success in this area. But before I turn to those, let me take just a few moments to furnish you with some important points of context.

Context [Slide 3]

Bill [Hughes, Chairman of the Green Property Alliance and the Project Steering Group] has already highlighted the key aims and objectives of the research, and provided some insight on its gestation. A key starting point to highlight is the conclusion of last year's Progress Report to Parliament by the Committee on Climate Change.

This found that emissions from the commercial buildings sector had remained reasonably constant over several years, with the exception of a temporary downward blip immediately following the onset of the financial crisis.

In view of that trend, and with the buildings sector overall falling short of the emissions indicator set for it, the Committee recommended that a comprehensive review of policy be undertaken.

This was a key vindication of the commissioning bodies' motivation to undertake the research. We are grateful to all of them for their funding, support and – invaluable - their counsel throughout the project. We also thank the UK Green Building Council, the Institutional Investors Group on Climate Change and the British Retail Consortium for their input as project Steering Group members.

Guiding Principles [Slide 4]

As you might expect of a project of this nature, there have been some key guiding principles which have acted as cornerstones of our approach.

These have led to a carefully written and highly nuanced report, which recognises that there are a number of positive features of the policy framework on which to build.

It also highlights a number of opportunities for enhancing policy effectiveness.

Critically, the research has been undertaken independently, objectively and with complete impartiality.

We are not partisan of any political interest, nor has this been an exercise of lobbying for the real estate industry.

Indeed, I hope that the project will serve to galvanise the industry to play a fuller and more informed role in supporting both the design and the execution of effective policy.

We have sought to complement other relevant work in this area, including through structured dialogue with a balanced cross-section of stakeholders.

We've been particularly concerned to ensure technical alignment with parallel studies are due to be launched next week by the Green Construction Board.

It is important to note that it was not within the scope of this work to make detailed recommendations on the design or implementation of individual policy instruments. Whilst we have reviewed and commented upon their effectiveness individually, we think that looking at the policy framework as a whole is a particular innovation of the study.

Briefly, Methods [Slide 5]

I should also just touch on the key research methods which started with a process of scoping with the project Steering Group.

We don't have time now to go through all of the in's and out's on that, but it is worth noting in particular that the planning system was excluded in large part due to the high level of local variance in the implementation of energy and carbon policies.

Ultimately, 26 policy instruments were scoped in – all of which have a direct or indirect effect on energy and carbon performance in commercial buildings.

Some of these instruments have a principal policy goal that is not energy or carbon focused but through which consequential effects on energy or carbon performance in the lifecycle of buildings may arise.

Following the scoping exercise, we set about an extensive review of literature, both on relevant policy issues in the round, as well as in relation to each of the instruments themselves.

Our objective was to assimilate as wide a range of academic studies on the subject as we reasonably could, whilst also building a picture of market sentiment on the design and implementation of policy.

We then complemented and compared this with a primary market survey through which 330 responses were yielded. We used an expert stakeholder group to validate the survey findings and to consider some of the apparent implications which arose as a result.

So, to the key findings of the research....

Headlines [Slide 6]

If there are three headlines to leave you with today, they are these:

- First, there is considered to be a disconnect between the importance of certain pre-conditions of policy effectiveness and the adequacy of the current policy-making and implementation approach;
- Secondly, there is deemed to be considerable scope for improving the effectiveness of policy by reducing complexity, enhancing certainty, better targeting, and by bundling mutually reinforcing policies into packages which lead to greater continuity of effect through the property lifecycle;
- Lastly, there is a need for greater collaboration between industry and government on the design and implementation of policy, and for which both have very important roles to play.

Let's look at each of these in a little more depth....

Disconnected pre-conditions of policy effectiveness [Slide 7]

No text

Pre-conditions of policy effectiveness [Slide 8]

Our review of published literature led us to determine a number of pre-conditions of policy effectiveness, which should effectively be seen by Government and industry as principles of good policy-making *as a process*.

Firstly, the market needs clear signposting, particularly given the timescales over which investment, asset management, leasehold and development decisions are taken.

- There needs to be confidence that progressive policy direction will be maintained, giving clear lead-in times with accurate information on details such as levies or tariffs. Policies should incorporate transparent objectives and targets with simplicity at their heart.
- Comprehensive consultations should be run efficiently within prescribed timescales.

The market needs to be positively encouraged to transition from business as usual to one that follows the necessary carbon reduction pathway. This requires:

- A framework that offers adequate scale of opportunity and confidence that its duration will match or exceed the expected period required for capital invested to be repaid
- It also needs policies that make use of markets to minimise the costs of achieving energy efficiency objectives.
- And where appropriate, the market requires incentives to be provided that recognise the risks associated with energy efficiency investments, or other measures to reduce those risks.

For the sake of efficiency and clarity, policies need to be connected.

- The framework needs to cover all areas of the buildings sector to reflect the cost effective potential in each, and instruments need to be capable of being bundled into policy packages.
- There should be minimum overlap between policies including effective co-ordination of policies across Government Departments.
- The alignment of energy efficiency with wider policies, such as those on energy supply, is also important.
- And, where appropriate, complementary Government-led demand creation policies, including communication and information campaigns, are necessary to create awareness and the “pull-effect”.

Finally, but by no means least, the effectiveness - and indeed the fairness of policy - relies on enforcement, which is underpinned by:

- Comprehensive, enforceable review mechanisms and timelines to ensure delivery of intended outcomes.
- It also requires institutions that have the mandate and adequate resources to deliver or oversee effective implementation.

Gap between importance and adequacy [Slide 9]

We asked an expert stakeholder group to validate these pre-conditions of policy effectiveness. We also asked them to rank them in terms of their relative importance and in terms of the adequacy of the current policy-making approach in relation to them.

This slide illustrates the results of that ranking process.

There are some subtle differences between the considered importance and the current status of each pre-condition, as you can see.

For example, having institutions in place that have resources to oversee implementation is ranked joint highest in terms of importance, yet lowest in terms of current adequacy.

Of all of the features of the current policy approach, the consultation process is considered to be the most adequate.

In truth though, the relative importance of the pre-conditions are held to be *broadly* similar. The same can be said of their current status.

The striking thing about the results is the gap between the importance and the perceived adequacy of current policy-making approaches.

This does seem to mirror some of the key findings of the market survey and this seems a good point on which to Segway into our findings on the policy framework itself.

Considerable scope for improving effectiveness of the policy framework [Slide 10]

No text

Policy mapping across the property lifecycle [Slide 11]

You can see here the arrangement of policy instruments along the commercial property lifecycle - shown in dark blue - from pre-construction on the left of the slide as you look at it, through construction, occupation and refurbishment or redevelopment on the right.

The financing and transactional stages of the lifecycle are also shown but these are of course fluid in terms of their position in the sequence of events.

Those instruments shown above the lifecycle row are intended to act as incentives. This includes the likes of the Enhanced Capital Allowances and Feed-in Tariffs.

Those directly below it are statutory obligations, examples of which include Building Regulations and the Air Conditioning Inspection regulations.

Those at the bottom of the graphic are typically levies or taxes of one form or another, within which have included the CRC Energy Efficiency Scheme.

The instruments shown in the darker green have a focus on different boundaries of operational energy or carbon - that is energy or carbon associated with running buildings or with on-site construction activities, the latter in the sense that they are pertinent to the operations of contractors.

The lighter green also denotes a focus on operational carbon but these are policies which, at the time of writing the report, were yet to be implemented.

Those shown in light blue are policies which have an effect on embodied energy and carbon; that is, energy and carbon associated with the sourcing, manufacturing and transportation of the materials used in constructing and fitting out buildings.

It is clear that the distribution of policies across the lifecycle is not even. However, this is not a direct proxy for carbon impact or administrative burden because some instruments have a greater effect than others.

Also, different organisations will be subject to different combinations of policy effect, based in part on their role in the lifecycle, but also as a result of differing eligibility criteria – eligibility for the CRC, for example, is premised on an energy consumption threshold, whilst greenhouse gas reporting is mandatory for quoted companies.

Some instruments affect multiple stages of the lifecycle. Building Regulations, for example, will influence the pre-construction and the construction process. Similarly, the requirement for EPCs takes effect on completion of construction and also in relation to freehold and leasehold transactions.

One particularly obvious characteristic of the policy framework is that there is no specific policy emphasis on embodied carbon which is widely held to account for around half the true carbon impact of commercial buildings.

Whilst there are some fuzzy boundaries between embodied and operational policy effects, the overwhelming majority of instruments address operational carbon, and the only two deemed principally relevant to embodied carbon – the Landfill Tax and Aggregates Levy - are a function of different policy goals.

Many of the people with whom this graphic has been shared during our stakeholder engagement processes have been struck by the extensive composition of the policy framework, and the dynamics and nuances of the impact of the various instruments. Indeed, even attempting to categorise the instruments into this basic scheme has given rise to considerable debate.

Some key market perspectives [Slide 12]

It is perhaps unsurprising then, that the market, according to our survey, views the policy framework as complex or highly complex.

96% of the 330 respondents said so.

Three quarters disagreed or disagreed strongly with the statement that the framework of instruments is clear and simple to administer and understand.

Some key market perspectives [Slide 13]

Importantly though, the survey results also indicated a striking association between levels of policy familiarity and the perceived levels of business benefits arising from the policies.

In that sense, one might reasonably conclude that efforts to further increase market familiarity with the policies would further reinforce the perception of benefit.

Effectiveness of policy design [Slide 14]

As with the pre-conditions of effective policy-making processes, we also devised a suite of effectiveness criteria for individual policy instruments themselves – five relating to policy design and five relating to policy implementation. Our full report defines these in detail.

A range of published sources were reviewed, including responses to consultations, press articles and academic or industry reports and the nature and tone of comments noted in relation to each of the assessment criteria.

From this, a RAG rating was ascribed to each policy to reflect the balance of sentiment in relation to each of the criteria.

Green denotes that limited criticism and generally supportive comment were observed. Red implies the contrary. Amber denotes a mixed bag of opinion.

This slide shows the aggregated RAG rating for each instrument in relation to the five criteria of **design** effectiveness.

Effectiveness of policy implementation [Slide 15]

This slide – and notice the transition – shows the aggregated RAG rating for each instrument in relation to the five criteria of **implementation** effectiveness. In this case, those shown in grey are policies which are yet to be implemented.

Generally, we found that policies are perceived to be less effective in implementation, compared to their effectiveness in design – a degradation of effectiveness over the policy lifecycle. This is particularly pronounced in relation to incentives, but appears to be the case for obligations too.

Conversely, the implementation of penalties appears to be better perceived as being more effective.

However, some of the visual impact of the differences between effectiveness in design and implementation are a function of instruments which are repeated at multiple stages of the lifecycle.

Across the framework criteria, specific which appear most susceptible to negative sentiment relate to certainty, working with the grain of the market, complexity and enforcement. This to some extent mirrors the rating of the pre-conditions of policy effectiveness.

Wide spectrum of perceived effectiveness [Slide 16]

In addition to gleaning views on the policy framework overall, we also used the market survey to seek views on the perceived relevance, familiarity, effectiveness and administrative burden for each of the policy instruments.

A limited selection of the results are shown here to illustrate the significant variation in results – the blue shading shows the results for the instrument, and the green line is the average of the results for all instruments.

It is also possible to compare the differing levels of alignment between the results of the market survey and the balance of sentiment revealed in the review of published sources from which the RAG ratings were derived. You can see this by comparing the shape of the spider diagrams with their corresponding RAG dots.

I could spend ages teasing out a bunch of specific observations and questions from these but we simply don't have time for that now.

Policies having the greatest beneficial effect [Slide 17]

However, it is worth reflecting for a moment on our over-arching conclusions about the types and functions of policy that are considered to be most effective.

Building regulations, codes and standards are considered to be the most cost-efficient and effective way of changing market participants' behaviour... assuming of course, that these are prepared and delivered in accordance with the pre-conditions of policy effectiveness we touched on earlier.

Choice-editing policies which prohibit the use of a particular product or standard are also seen as effective.

Policy bundles are particularly effective whereby a minimum standard is set; a clear label is devised; with financial incentives awarded for over performance and penalties levied for under-performance or non-compliance.

We also find that, in general and as a result of inelasticity in the market in relation to energy prices, broad impact policies which simply apply a cost amplification effect at the point of end use tend to be less effective in changing behaviour.

Similarly, those which require a process without any compulsion to act on the findings (e.g. Air-Con Assessments) are less effective

Transparency and collaboration deficits on policy implementation [Slide 18]

And so to the third of our headlines...the deficit in the transparency on policy implementation, and the collaboration between Government and industry on monitoring policy impacts over time.

Determining the carbon impact of policies [Slide 19]

This issue is exemplified by the fact that we were challenged hard by the project Steering Group to quantify the energy reduction and carbon impact of the policies. We found this, without going down the route of advanced econometric modelling that would have been well beyond the scope of the study, to be impossible.

This is a complicated issue which I can't do justice to now, but it is certainly one that needs to be addressed going forward.

The graph here shows the cumulative estimated carbon impact of policy instruments based upon the latest Updated Energy & Emissions Projections published by DECC. These projections are revised annually by the Government departments responsible for the respective policies and collated by DECC.

Although a general methodology statement describes how the figures are projected, none of the original reference models and data sources are publicly available. So, whilst the resulting data is published, the specific methodologies underpinning the calculations are not. We simply do not know what they are and neither do those within the DECC that are responsible for their collation.

We do know that there is no consistent approach across the policies; the Treasury Green Book tells us that.

You will notice that the estimates do not cover all of the policy instruments within the scope of this study – typically, only those with a specific carbon saving goal are subject to an assessment of emissions savings.

It is interesting to note that the projection table reported in 2013 was materially different from the 2012 version. In the space of one year, the projected total saving by 2027 in the commercial and public service sector has been reduced by more than 30%. However, without further investigation into the detailed modelling assumptions, it is not possible to conclude whether any such change is a direct indication of policy effectiveness.

If the Updated Energy and Emissions Projection models can be analysed in further detail, with greater transparency provided on the current modelling approach in relation to each policy, then it may become a robust measure of policy effectiveness, and a key monitoring tool for industry and governmental stakeholders.

We also suggest that future policy design should consider a robust bottom-up data collection mechanism to provide the best possible method to evaluate each policy against appropriate KPIs.

This would also serve to improve transparency in the market on the true energy and carbon performance of stock.

Furthermore, it should be recognised that securing industry buy-in to the metrics underlying policy is critical to the traction of the policies themselves and this has been identified in the research as a key issue.

Headlines [Slide 20]

By way of wrapping up, let's return to our slide on the three key headlines.

To address these, we offer a wide-ranging suite of recommendations which should 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.

Specifically, recommendations are provided with respect to the following:

- 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 upwards only policy trajectories to the owners and users of commercial buildings, including on a policy-specific 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.
- Improving the transparency of Regulatory Impact Assessments and 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, including through greater independent scrutiny.
- Establishing a clear monitoring and scrutiny role for a representative, collaborative group of policy-makers and commercial building actors, ideally by mandating such a function to an existing body.

Disclaimer [Slide 21]

Thank you for your attention.

It now gives me great pleasure to handover to Sir Robert Finch to chair the panel discussion.

Sir Robert is a former Senior Partner at Linklaters and Lord Mayor of the City of London and is former Chairman of Liberty International.

He was awarded a knighthood in 2004 for services to the City of London.

He currently chairs the Property Industry Alliance, which brings together a number of industry bodies to encourage collaboration on matters of common interest.

Sir Robert.....

Panel Discussion Holding Slide [Slide 22]

No text.

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