Climate Bonds Green Property Standards: An overview

1. The green bond market needs standards; standards for buildings are particularly important

The Green Bond market is developing rapidly and in advance of widely accepted standards for use of proceeds, project evaluation and ongoing reporting. The Green Bond Principles are an important first step towards product definition by establishing best-practice guidelines around process, but significant work remains to establish definitions around what projects or assets qualify as green. As green bonds can be issued in a broad spread of sectors and industries, this implies that a range of different standards for different asset classes is required. These asset-specific standards need to be suited for the bond market.

The lack of clarity on what qualifies as green can lead to missed opportunities. It runs the risk of some key asset classes being under-represented in green bond issuance, particularly when directing investment towards these assets is crucial from a climate mitigation or adaptation perspective. One such example is low carbon buildings.

The building sector presents one of the biggest opportunities to mitigate climate change. Globally, buildings account for 30% to 40% of total final energy demand and over 30% of all energy-related CO2 emissions[1,2]. This strongly implies that significant financing will be required to realize the opportunities for drastic cuts in emissions from the built environment. The bond markets can provide this vast scale of investment required.

The need for emissions reductions in the building sector is not just about climate; there is also a huge economic rationale for improving energy efficiency in buildings, as it has been estimated that potential energy savings in buildings could reach between 20 and 40%[3].

The long lifetimes of buildings imply that when implementing emission cuts, it is essential to achieve *deep* cuts in emissions, as shallow cuts might have a perverse impact on emissions performance over time. For example, retrofits of buildings do not happen very often. Building new or retrofitting existing buildings with only minimal cuts in emissions locks in weak emission performance until the next investment period, which could be as long as 30 years. Standards that ensure green bond issuance proceeds go to sufficiently ambitious emission cuts in buildings will be crucial for green bonds in the building sector to have positive climate impacts.

Tapping into the bond market to finance low-carbon buildings is not only crucial, but also an opportunity. Standards are required to do this effectively.

2. Low-carbon building standards need to be specific to the green bonds market

Standards need to be suitable for the bond market and ensure that bonds are aligned with the substantial emissions cuts required.

This means:

- ✓ Standards that have a single focus on emissions performance

[1] http://www.iea.org/publications/freepublications/publication/TechnologyRoadmapEnergyEfficientBuildingEnvelopes.pdf
[2] http://www.unep.org/SBCI/pdfs/SBCI-BCCSummary.pdf
[3] http://www.worldenergy.org/wp-content/uploads/2013/09/Complete_WER_2013_Survey.pdf

- ✓ Standards with hurdle rates that ensure that emissions cuts are sufficient to avoid the shallow retrofits that can have a negative impact over time due to locking in weak performance
- ✓ Standards that measure ongoing performance, not just a snapshot at one point in time, as bond investors hold an investment over time
- ✓ Standards that account for the variation in data disclosure and availability on buildings emissions performance
- ✓ Standards that facilitate aggregation to achieve investment opportunities at scale
- ✓ Standards that are practical for all markets and jurisdictions to ensure a broad universe of eligible energy efficiency investments.

The expert committee concluded that existing green building standards are not ideal. New standards need to be developed.

- Current green building standards (LEED, BREEAM, Green Star etc) focus on a broader definition of green, where the carbon emissions performance of the building is only one component factor. As a result a building may score well despite having a poor emission performance. For example, an academic review of the application of LEED certification in New York found no correlation between emissions performance and buildings rated Silver or lower, and variable correlation for those rated Gold and above[4].
- Current green building standards only measure predicted or potential performance as a snapshot, at one point in time, when the building is built. While this may be suitable where project performance is measured for building delivery, it is the same as operational performance.
- The costs associated with the certification process for broader green building standards in assessing the potential for performance can be onerous and a potential barrier to participation for buildings that are not already certified, such as the majority of existing assets.

Developing new standards that address these issues is the aim of the Climate Bond Standard for low-carbon buildings.

3. CBI's Standards for Low-Carbon Buildings

The Climate Bonds Standards methodology has been designed to build on the existing green building standards in the market in two ways. First, the Standards have been developed by industry experts to ensure that the lessons learnt from developing other standards for green buildings feed into the Climate Bonds Standards work. Second, the specific criteria under the Standards leverage parts of existing energy and greenhouse gas rating tools, benchmarking tools and reporting tools to facilitate a transition.

To ensure that the integrity of the Climate Bonds Standard for green buildings is maintained, a ***minimum level of carbon performance is required*** to be demonstrated by ***portfolios*** of buildings seeking to be Climate Bonds certified. A minimum level of carbon performance at the portfolio level is also required to be maintained and verified over the life of the bond. Setting the requirements at the portfolio level increases the flexibility for issuers and investors, as this implies that a mix of carbon performance at the building level is accepted, as a share of high performance buildings in the portfolio can compensate for lower performance buildings – compliance with the Standards is measured at the average.

To achieve this for different type of building assets with varying degree of data disclosure and current emissions performance, ***the Climate Bonds Standard has set out four sets of complimentary criteria.*** This ensures that in defining a solution that is robust and, over time, has the potential to be universal, we do not in the immediate term discourage funds flowing into other important investment opportunities that are not able to participate either due to lack of existing data, limited sophistication of participants or poor fit to underlying asset performance.

[4] Efficacy of LEED-certification in reducing energy consumption and greenhouse gas emission for large New York City office buildings. By John H. Scofield. Energy and Buildings Journal - 67 (2013) 517–524

A. CBI's low-carbon building standards: Portfolios of commercial buildings

1. For commercial buildings located in cities with an emissions baseline established at the city level, buildings qualify under the Climate Bond Standard if:*

- *Their emissions performance meets the Climate Bonds hurdle** derived from the emissions baseline*

And:

- *They maintain that performance over the life of the bond.*

Or:

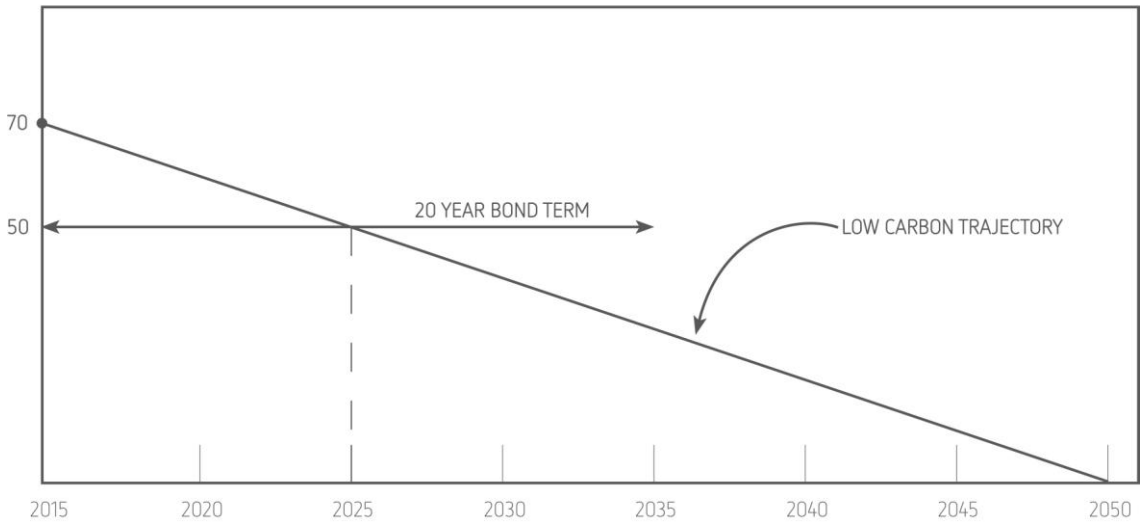
- *Their carbon performance is improved over the term of the bond, to achieve a level of carbon performance equivalent to maintaining the Climate Bonds hurdle for the life of the bond.*

- *Monitoring and verification is required annually for both pathways.*

* The emissions baseline is established at the city level from actual operational data and represents the top 15% of city-level emissions performance.

** The Climate Bonds hurdle is set at the midpoint of the bond term based on a linear trajectory from the emissions baseline to an aspirational target of zero carbon in 2050.

EXAMPLE: An emissions baseline equivalent to 70kgCO2/m2 is established for Sydney in 2015. If a 20 year bond were to be issued the same year, the Climate Bonds hurdle for the bond issuance would be 50kgCO2/m2 as illustrated below.



The rationale for setting performance baseline at the city-level is three-fold:

- First, it facilitates investment under the Standard to occur throughout the world. Applying the top 15% of the market requirement at a global level would skew investment to best-performing developed countries with decarbonised grids and/or cold climates, as they have the most developed energy efficiency measures. While this bias could be corrected by using theoretical quantified models to account for the climatic factors and other known biases, this is a complex process with significant risks of estimation errors.

- Second, setting a city-level baseline provides a common performance requirement for all buildings relative to the local market, which enables easy aggregation and pooling of projects into investment opportunities at the scale required by the bond markets. It avoids the high transaction costs involved in an approach relying on project specific performance baselines.
- Third, the recent trend towards mandatory disclosure for buildings in a range of cities means a performance baseline is readily available for a significant amount of investment opportunities in the built environment. City level baselines are currently available for commercial office buildings in New York City, Washington DC, Sydney, Melbourne. More soon to be determined.

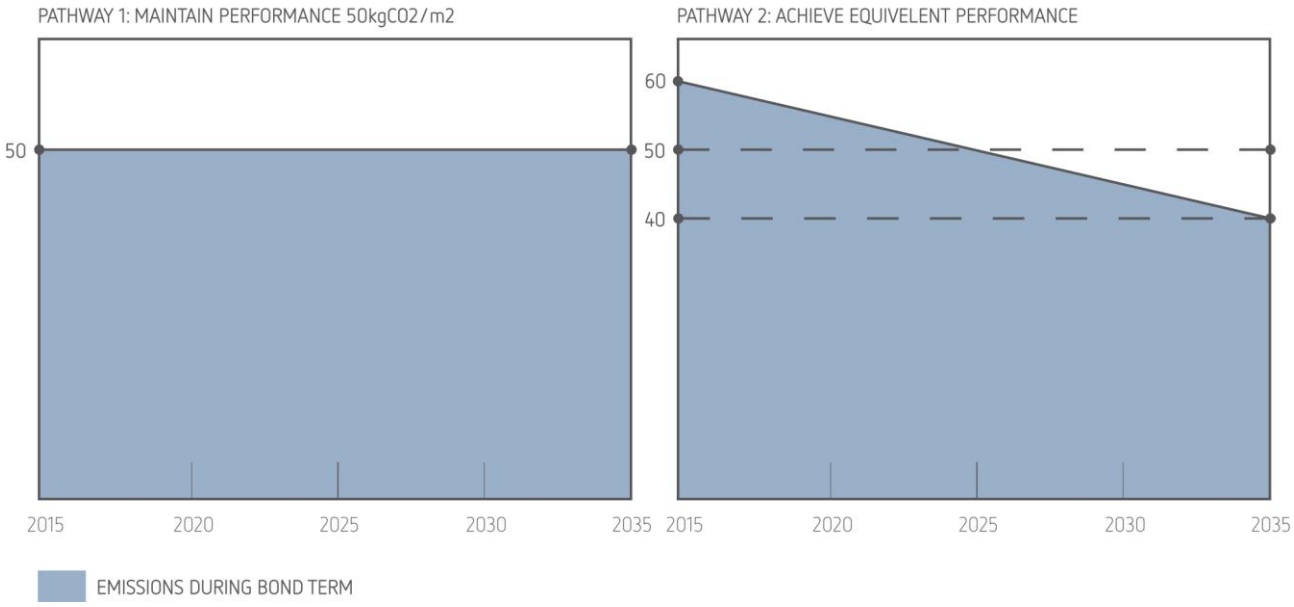
The rationale for including performance requirements over time is to ensure long-term gains in the energy efficiency performance of the buildings, which is important for investors, as outlined in section 2. Similarly, the rationale for adjusting the performance requirements based on the date of issuance and the length of the bond term is to avoid the lock-in effect.

There are two options for compliance with the Climate Bonds hurdle for a commercial building portfolio:

Pathway 1: Where the aggregate performance of a portfolio of buildings achieves the Climate Bonds hurdle at the time of bond issuance, no improvement is required over time. The portfolio must simply maintain its low-carbon performance to maintain its Climate Bonds status.

Pathway 2: Where the aggregate performance does not achieve the Climate Bonds hurdle at the time of bond issuance, improvement over time is required. The issuer can commit to achieving a more stringent level of performance by the end of the bond term. In this case the performance baseline is determined based on achieving an equivalent level of carbon performance as would have been achieved through Pathway 1.

The two pathways are illustrated below for a Climate Bond hurdle of 50kgCO2/m2 and a 20 year bond term:



A hybrid of these two pathways is also possible, but requires further exploration on an appropriate mechanism (see Climate Bonds: Summary of Commercial Building Bonds in folder).

2. For commercial buildings located in cities where an emissions baseline cannot be established at the city level, or commercial buildings in developing economies, buildings qualify under the Climate Bond Standard if:

- *They have achieved LEED gold or platinum certification, or equivalent under other building standards such as BREEAM and Green Star, within the last 5 years*

And:

- *Achieve a minimum 30% emissions improvement against ASHRAE 90.1 criteria (a part of the LEED standard) or equivalent stringency of additional emissions improvements under other building standards*

Or:

- *Meet the carbon hurdles set in the IFC's Edge tool*

And:

- *The green bonds linked to the building has a maximum term of 6 years*

Ongoing monitoring but no ongoing verification beyond that required by the building standard used is required.

The idea is that the requirements set out here are deemed to be equivalent to emissions performance being in the top 15% of the local market, as set out by criteria set 1. This version of the standard is intended for ***use in the transition phase,*** while city level baselines and building level emission data is being established in more cities, which will subsequently allow use of criteria set 1 for all commercial buildings. The use of common baselines in criteria set 1 might provide additional impetuous to more cities to establish disclosure schemes. This transition set of criteria is included under the Standard to ensure an improved global reach of the Standard while this process of establishing city level baselines is occurring. The cap on bond term for compliance under this part of the Standard is put in place to ensure its used for transition purposes only.

B. CBI's low-carbon building standards: Portfolios of residential buildings

For residential buildings, buildings qualify under the Climate Bond Standard if:

They have achieved compliance with a building code that is deemed equivalent to moving the building into the top 15% of the market in terms of emissions performance.

No ongoing monitoring and verification beyond that required by the building standard used is required, due to the practical limitations.

This proxy approach was taken for residential, because it is not practical to expect the annual reporting of carbon intensity for each home that is mortgaged. The approach of measuring relative low carbon performance against the local market is maintained, but it relies on sufficiently stringent building codes or rating tools to assess the inherent energy efficiency requirements of the building structure, and use this as a deemed measure of performance.

C. CBI's low-carbon building standards: Portfolios of energy efficiency upgrade and sub-building level projects

For energy efficiency upgrades in commercial or residential buildings, projects qualify under the Climate Bonds Standard if:

The project specifies a percentage emissions reduction, or such a percentage reduction can be quantified for the project, relative to current performance of at least 50% for bonds with 30 year terms, and at least 30% for bonds with 5 year terms.

No verification beyond that required by the upgrade agreement or performance contract is required. Annual reporting is required for commercial buildings; no ongoing reporting requirements apply to residential projects.

This standard category offers an option for climate bonds certification for energy efficiency upgrades in buildings that do not comply with the criteria set out above for commercial and residential buildings. The inclusion of this option under the Standard addressed the need to attract investment to improve low performing buildings, as well as the best-in-class buildings that qualify under criteria A and B. It recognizes the large potential for improvement in the worst performing buildings, while the inclusion of hurdle rates for their upgrades ensures that investment in the low-performing buildings achieve the deep cuts needed to avoid locking in sub-climate target performance.

5. Summary

The opportunity for bond investment in low-carbon buildings is immense. The Climate Bond Standard for Green Property balances the need for ambitious emissions cuts with ensuring compliant product under the standard is large enough to provide immediate and vast investment opportunities. For example, on the commercial side, the top 15% of buildings in a city like New York offers a huge investment pool.

Moreover, by including transition criteria that do not rely on direct and continuous measurement of performance, and by including sub-building level projects provided given hurdles are met, the Climate Bond Standards for Green Property ensures that significant markets and assets classes can be included immediately, and provide a large deal flow of product for investors while the market matures. The inclusion of transitional criteria under the standard is important to facilitate the inclusion of developing economies given the relative lack of sophistication in property ownership. Market qualification will be assessed using the International Finance Corporation's Edge tool.

For issuers, the Climate Bond Standard for Green Property can offer quicker and cheaper issuance of green bonds, by simplifying the process of establishing green credentials of bond issuance. This was a key aim in the development process, recognizing that cost of the initial transaction and ongoing compliance requirements has been a barrier to green bond issuance for buildings. By establishing transparent rules for use of proceeds and project evaluation, the Standard is able to provide a significant reduction in project and transaction costs compared to the current approach of using bespoke verification processes. Moreover, using Standards allow an easy aggregation and pooling of assets, enabling scale, which again can reduce relative cost of issuance.

For investors, the Standard provides assurance that the green bonds issued under the Standard have a robust positive impact on climate change mitigation.

The Climate Bond Standard includes a range of buildings and investment products. The certification is designed to be simple and affordable to achieve for issuers, and one that offers investors a large potential pool of certified investment products, while ensuring robust climate credentials.