

**Climate Bond Standard  
Energy Efficiency**



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# **Commercial Property Bonds**

## **Verified Property Methodology**

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# Executive Summary

## Objective

To define a methodology that will allow verified Climate Bond certification of investment grade commercial building assets.

## Goals

To provide a framework for Climate Bonds that offers the greatest opportunity for environmental additionality and maintains the integrity of the Climate Bonds brand through a transparent monitoring and verification framework.

The characteristics of the scheme that require direction from the Technical Working Group have been grouped into sections dealing with:

1. Baselines
2. Targets and Trajectories
3. Implementation

## Guiding Principles

The following principles of design have guided the recommendations in this report:

- **simple aggregation** of individual assets to provide:
  - bonds of sufficient size to be attractive to institutional investors.
- **lowest cost of application** and ongoing monitoring and verification to ensure:
  - compliance costs do not undermine the attractiveness of Climate Bond certification
  - the scheme is able to be used for assets in developing countries
- **climate relevant metrics** to achieve:
  - compatibility with existing international frameworks for financing
  - relevance to corporate reporting frameworks
  - relevance to emerging city GHG abatement policies
- **transparency** of approach and methodology to support:

- market transparency
- improved management of performance risk at property at level

## Summary of Scheme Design Recommendations

It is recommended that the Eligibility Criteria for the Climate Bonds Standard be based on a framework that assesses energy efficiency as follows:

- The scheme will provide verified Climate Bond certification for investment grade commercial building assets that have a carbon intensity ( $\text{kgCO}_2/\text{m}^2$ ) in the lowest 15%\* of the local market. \*To be agreed.
- The boundaries for assessment will be set based on energy end uses that lie within the building owners control. For example, landlord-tenant separation would define the control boundary for offices with only landlord controlled items included. Central services provided to serve tenant process loads would not be included.
- The scheme will leverage parts of existing energy and greenhouse gas rating tools, benchmarking tools and reporting tools where there is alignment with the Climate Bonds Standard (see Appendix A: Climate Bonds Integration with Rating, Benchmarking and Reporting Tools.)
- The scheme will define eligible building types and classifications will ideally translate between countries and align with primary bond markets.
- The scheme will use a carbon intensity metric with an area denominator ( $\text{kgCO}_2/\text{m}^2$ ), rather than an occupancy denominator, as area can be more easily and robustly measured and audited.
- The area method of measurement used in the assessment will be based on the income generating area or useable area measured to the relevant local market standards rather than a universal measure.
- The scheme will use a baseline trajectory based on an ambition of zero carbon by 2050.
- The scheme will derive initial baselines from collection and analysis of actual operating building data for each asset type and geographical location, setting bespoke baselines for each group.
- Sub-classification of asset types, aligned to investment grades, that better reflect the activity of the space and the extent of services provided may be required to set fair baselines.
- The geographical boundaries for baselines will be aligned with global markets such that baselines are established for each major investment market.

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- A year-on-year climate correction methodology will be used to adjust the performance target so that buildings are not penalised due to a particularly hot and/or cold year.
- An area weighted aggregation methodology will be used to enable aggregation of energy efficiency projects into larger scale opportunities.

# Baselines

## Problem Definition

In order to assess the energy efficiency of a building, a baseline performance level (or target) needs to be established to determine which assets meet the minimum performance required to be eligible for climate bonds. It is essential that the baselines represent a standard of energy/carbon efficiency that will provide environmental additionality. It is also essential that a common metric be used for all baselines (eg. kgCO<sub>2</sub>/m<sup>2</sup> NLA) to enable baselines to be aggregated.

Due to differences in the operational energy intensity of different building types as well as variation in the carbon intensity of different fuel types in different geographical locations, unique baselines will need to be established for each building type and location.

Clear definitions will also need to be set regarding the energy end uses required to be included in the measurement of a building's energy consumption (e.g landlord vs tenant). Although metering of energy end uses within a building is generally inconsistent around the world, markets that have a long history of high levels of securitisation and institutional property ownership tend to have accepted metering arrangement between landlords and tenants for investment grade assets.

## Recommendation

It is recommended that baselines be derived from analysis of actual operational building data. Statistical analysis can be used to establish the energy performance distribution of each building class in each investment market and a baseline set at an appropriate point (e.g. top 15% of market, 50% reduction from market average). While different asset types in different locations will have differing average/median energy/carbon intensities, it is recommended that a common approach be used to setting each of the eligibility baselines.

Data for some building types and locations (e.g. those with existing mandatory disclosure schemes) will be easier to access than for others and as such it is recommended that a sectoral and geographical approach be taken, with baselines established as data becomes available.

The measured energy consumption should align with the boundaries of ownership and control that exist in the property sector. Only items within the building owner's control should be included in the assessment. Energy used for central services provided to serve tenant process loads would not be included. The lack of established metering to meet this need should not be a barrier. It is recommended that the Climate Bonds Standard require suitable metering as part of the eligibility criteria as this will be essential to effectively manage the building performance for the term of the Climate Bond financing

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# Ambition, Trajectories and Ongoing Performance Targets

**Problem Definition**

Once appropriate baseline targets have been agreed, the ongoing performance trajectory must be established. The trajectory must align with the overall ambition of the Climate Bonds Standard. The ambition level proposed for Climate Bonds is an ideal target of zero carbon by 2050.

Generally building level assessment methods do not increase stringency or expectation through future cast ambition and a moving performance target over the life of the bond may be seen as a risk for investors however it could be argued that a clear unambiguous but aggressive trajectory is more bankable than an ambiguous trajectory with uncertainty over expectations in the near and long term future.

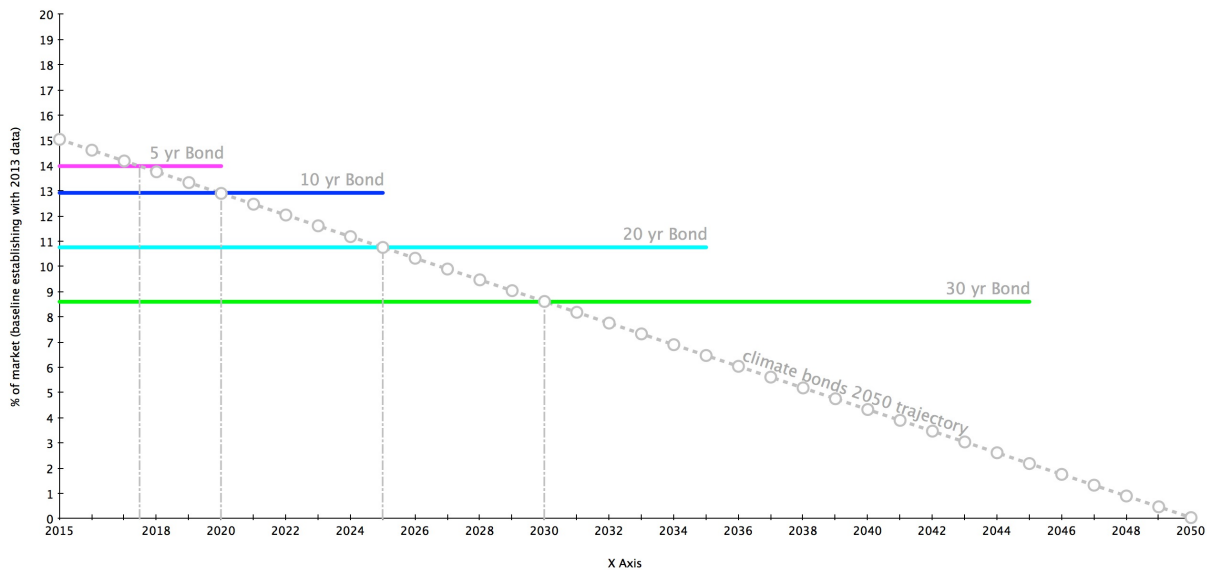
Regardless of the trajectory, it is critical to the design of the Climate Bond Standard that both the ultimate ambition and the incremental targets to get there can be transparently understood for each and every asset class and investment market that might be included in a bond. The ambition for Climate Bonds must as a minimum match the ambition of national, state and city greenhouse gas targets and legislation. Ideally it should be more ambitious.

**Recommendation**

It is recommended that the agreed ambition for zero carbon by 2050 be retained and that a linear trajectory for each asset class and location be applied from a 2015 start date. Once calibrated a fixed trajectory is proposed.

To overcome the issue of assets needing to achieve a year on year moving target, it is proposed that various options for setting ongoing performance targets be explored with the preferred approach being to offer straight-line performance targets that are derived from the zero carbon 2050 trajectory but set at the mid point of the bond term as illustrated below:





This means that assets would need to achieve the same performance target year on year and would not be required to improve their performance over time.

Under this approach, it is proposed that the greenhouse gas emissions factors used to determine the carbon intensity of the building would be locked in at the commencement of the bond so as not to provide a benefit from decarbonation of the grid.

A year on year climate correction mechanism would be used to avoid the case where a building fails to meet its performance target and funding is pulled due to climate impacts that are out of the building's control. It is recommended that the baselines be adjusted using a year-on-year climate correction methodology such as that used by Energy Star in the USA or DEC in the UK so that buildings are not penalised due to a particularly hot and/or cold year.

## Implementation

### 1. Aggregation

#### Problem Definition

To date, energy efficiency projects have generally been considered too small to be commercially attractive to large investors. In order to overcome this hurdle there is a need to enable aggregation of energy efficiency projects into larger scale opportunities. As such, the metrics and assessment methodology used to assess energy efficiency must allow an aggregation methodology to be defined.

#### Recommendation

It is recommended that an area weighted aggregation methodology be used to establish an aggregated baseline for each energy efficiency project consisting of multiple building assets. The actual performance

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of each of the assets should also be area weighted and compared to the aggregated baseline to determine project eligibility. Minimum performance requirements for individual buildings within the project may also need to be considered.

## 2. Monitoring and Verification

### Problem Definition

Monitoring and Verification requirements of the standard are critical for credibility. On one hand they need to ensure transparency and assurance that Climate Bonds ambitions are met. On the other hand they have to be sufficiently light-touch to ensure that project assessment costs are kept to an absolute minimum. High compliance costs is considered the single biggest failing of energy efficiency funding targeted at buildings. If the cost of compliance outweighs the likely benefit from participation, uptake will fall away extremely quickly.

### Recommendation

It is recommended that the monitoring and verification standard of climate bonds should mirror those where civil and criminal penalties are highest. This means monitoring and verification should be self reported to a defined methodology and supported by an independent auditors sign off with respect to process and record keeping.

The process will greatly reduce the cost of year on year compliance and will remove the need to establish a Climate Bond accreditation for assessors. It also presumed the 'penalty' for not meeting the climate bonds targets will be sufficient to encourage accurate reporting.

To protect the Climate Bonds brand and credibility, it is further recommended that spot audits be initiated by climate bonds. The frequency and proportion of reports audited will be dependant on transaction volume.

## 3. Leveraging Existing Rating Tools

### Problem Definition

Given the degree of work (data collection, energy audits etc) already being undertaken by building owners to comply with existing energy and greenhouse gas rating tools, benchmarking tools and reporting schemes, there are questions surrounding how Climate Bonds certification will integrate with these tools/schemes.

The Climate Bonds Standard intends to leverage the work already being done to comply with these tools/schemes. The extent to which tools can be leveraged will be dependent upon the degree of alignment of the tool/scheme with the Climate Bonds Standard.

## Climate Bond Standard Energy Efficiency



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### Recommendation

The Climate Bonds standard should not in any way require, or incentivise, changes to existing energy and/or greenhouse gas rating tools, benchmarking tools or reporting schemes. It is recommended that the work being done to comply with existing rating tools and reporting schemes should be leveraged to reduce the work (and associated costs) required to demonstrate compliance with the Climate Bonds Standard.

Further detail regarding this integration is included in Appendix A: Climate Bonds Integration with Rating, Benchmarking and Reporting Tools.

## 4. Future Work

### Additional Considerations

- Determining and testing the appropriate baseline location;
  
- Access to data;

# APPENDIX A: CLIMATE BONDS INTEGRATION WITH ENERGY AND GREENHOUSE GAS RATING, BENCHMARKING AND REPORTING TOOLS

