

Climate Bond Standard Energy Efficiency		
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Residential Bonds

Deeming Property methodology

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Table of Contents

Executive Summary

Objective

Goals 1

Deeming methodology

1. Existing building codes and rating schemes 3

2. Attributes of assets 3

Target and Qualification

1. Target 4

2. Qualification 4

Implementation

1. Assessment of building codes and rating schemes 4

2. Aggregation 5

Future Work

1. Issues requiring technical clarification 5

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Executive Summary

Objective

To define a methodology that will allow the Climate Bond certification of Residential Mortgage Backed Securities.

Goals

To provide a complimentary framework for Climate Bonds that offers the greatest opportunity for environmental additionally and maintains the integrity of the Climate Bonds brand without relying on ongoing reporting from homeowners.

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

1. Deeming methodology
2. Target and qualification
3. Implementation

Guiding Principals

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

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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 Climate Bond certification for residential buildings that have a carbon footprint (excluding appliances) in the lowest 15%* of the local market. *To be agreed
- The scheme will leverage existing codes and assessment methodologies to provide qualification.
- The scheme will not differentiate between new and existing assets.
- The scheme will not disadvantage properties by size or number of bedrooms, etc.
- Individual building codes or rating schemes will be assessed by Climate Bonds to ensure sufficient stringency that any compliant residential building will be designed to achieve performance within the best 15%* of the local market.
- Project qualification will be by demonstration of compliance with approved codes or rating schemes.
- Aggregation will be by simple pooling of qualified buildings.
- Carbon abatement attached to the Climate Bond will be deemed without verification requirements beyond those required by the qualifying building code or rating scheme.
- It will be investigated whether a reliable volume of deemed abatement can be calculated.

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Deeming methodology

1. Existing building codes and rating schemes

Problem Definition

The methodology proposed for certification of commercial Climate Bonds is considered unsuitable for residential bonds due to the ongoing measurement and verification requirements associated with the methodology that would require ongoing reporting from homeowners.

Energy efficiency requirements within residential building codes are becoming more and more common and in certain jurisdictions, minimum energy performance standards are being assessed through dedicated rating schemes referenced by building codes to assess minimum compliance.

For example, in NSW the building code requires a BASIX rating be achieved for the development prior to development approval. The BASIX rating ensures that the building has been designed to a minimum level of energy, water and thermal comfort performance. To assess energy performance, the BASIX tool predicts the carbon emissions of the building relative to an average market benchmark. The predicted carbon footprint of the building must be a certain percentage less than average to achieve certification. The target varies by location and dwelling type. In Sydney, a stand alone dwelling must achieve a 40% reduction from the benchmark and on average across Australia the target reduction required is approximately 33%¹.

Recommendation

It is recommended that building codes and residential energy rating schemes (for example, Energy Performance Certificates (UK), BASIX (NSW, Australia)) used to assess the energy and/or carbon efficiency of residential buildings, be leveraged to allow certification of residential Climate Bonds, where the energy efficiency requirements of the building code and/or scheme are considered appropriately stringent. Assessment of the stringency of each building code and/or rating scheme will be required to ensure that a level of performance consistent with the Climate Bonds targets is achieved by the scheme.

Certification using this methodology will be a deemed certification and will remain distinct from the primary measurement and verification method used for commercial building Climate Bond certification.

2. Attributes of assets

Problem Definition

There is potential for variations in the attributes of different residential assets e.g. age (new vs existing), size (number of bedrooms) and type (standalone house, apartment, terrace) to cause the assessment methodology to be perceived as unfair for some assets (e.g. comparing a one bedroom apartment to a five bedroom house).

Building codes and rating schemes generally consider the size and type of the building when assessing compliance. To maintain the simplicity and transparency of the methodology, it is proposed that no additional correction or normalisation be made for these variations. New buildings will be required to meet the relevant building code or energy performance targets as part of their development approval and will be able to use this to prove eligibility, while existing buildings will need to demonstrate compliance with the relevant code or scheme to be eligible for residential Climate Bonds.

¹ http://www.basix.nsw.gov.au/basixcms/images/BASIX_Five_Year_Outcomes_Summary.pdf

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Recommendation

It is recommended that the methodology does not differentiate between new and existing assets and all assets be required to demonstrate compliance with the relevant approved building code or rating scheme. When setting appropriate targets for approval of building codes and/or rating schemes, consideration should be given to the impact of size/number of bedrooms and building type (house, apartment etc) so that particular building types are not disadvantaged.

Target and Qualification

1. Target

Problem Definition

A performance target, for example top 15% of the market, needs to be agreed to enable existing building codes and standards to be assessed and approved for use under the deemed methodology. Only building codes and rating schemes that are consistent with the agreed target will be approved.

Recommendation

Further investigation into the energy use patterns and corresponding energy efficiency building codes is required to determine the appropriate performance target. It is recommended that data available from a few key jurisdictions be used to assess the appropriate targets.

2. Qualification

Problem Definition

Projects will need to demonstrate compliance with the relevant approved building code or rating scheme to be certified under the residential (deemed) Climate Bonds standard.

Recommendation

For new builds, where the building code or rating scheme compliance is required as part of the development approval, the approved development application may be used as proof of compliance. For existing buildings, guidelines may be required to detail what level of assessment is required for the project to demonstrate compliance with the relevant building codes or rating scheme.

Where codes and/or schemes are not considered stringent enough or no codes exist, deemed residential Climate Bonds will not be available in these jurisdictions.

Implementation

1. Assessment of building codes and rating schemes

Problem Definition

Once performance targets are set, a methodology for assessment will be needed to enable assessment and approval of building codes and rating schemes under the deemed methodology.

Recommendation

It is recommended that guidelines be provided regarding what is required to demonstrate a building code or rating scheme complies with the performance targets of residential Climate Bonds however it should ultimately be the responsibility of the project to demonstrate compliance.

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Where a precedent exists and a building codes or rating scheme has already been approved as part of an application for residential Climate Bonds, the standard of scheme should be listed by Climate Bonds as an approved code or scheme and new projects should not be required to demonstrate compliance.

Consideration should be given to whether periodic (e.g. 5 yearly) reviews of building codes and rating schemes is required to ensure building codes and schemes remain aligned with the performance targets and aspirations of the residential Climate Bonds standard.

2. Aggregation

Problem Definition

As was the case with commercial building Climate Bonds, there may be a need to enable aggregation of projects so the scale becomes commercially attractive to investors.

Recommendation

It is recommended that any projects that comply with a building code or rating scheme approved under the deemed methodology should be allowed to be aggregated by pooling assets into a larger aggregated asset.

Future Work

1. Issues requiring technical clarification

Additional Considerations

- Setting appropriate targets (e.g. top 15% of the market);
- Method of assessment of building codes or rating schemes;
- Investigation as to whether deemed abatement can be calculated;