POST-ISSUANCE **REPORTING** IN THE GREEN BOND MARKET

Prepared by the Climate Bonds Initiative

Sponsored by Berlin Hyp, Luxembourg Green Exchange and BlackRock

Foreword from the sponsors

The green bond market has grown from a concept in 2007 to almost USD100bn in annual issuance and over USD200bn total outstanding. The growth has expanded the sustainable investment market from equities into bonds. The market has demonstrated that there are sustainable investing opportunities in fixed income, and that bonds can be used as a tool to drive a transition towards a low carbon and climate resilient economy.

But the market's development has not come without challenges and the integrity of the market remains a concern for investors. The Climate Bonds Standard was released in 2012, followed by the Green Bond Principles (GBP) in 2014, both of which provide guidance to ensure that the market is driving impact. A core principle of market guidance is reporting – issuers are encouraged to report back to investors frequently on the promises made at issuance.

To date, however, there has been little research on whether reporting is happening, whether it is timely and what makes good reporting. As development banks continue to push best practice by taking leadership in impact reporting, questions have been raised as to whether or not corporates should be doing the same.

We partnered with the Climate Bonds Initiative to tackle this important issue of reporting and specifically to analyse the state of reporting to date, propose definitions of what makes reporting useful and explore the value of impact reporting.

Introduction and methodology

This is Climate Bonds Initiative's first study on post-issuance reporting of green bonds. The aim is to follow up on post-issuance reporting by green bond issuers to see how thoroughly they are reporting on green bond allocation and projects.

The Climate Bonds Standard and Green Bond Principles both emphasise that issuers need to report back to investors post-issuance on how bond proceeds are being allocated. To date, there has been very little collated information on whether or not this is happening and the quality of information that is being provided. This report attempts to fill this gap.

What is meant by 'reporting'

Most market guidelines require that use of proceeds reporting is disclosed at least annually after issuance. While some issuers are also providing information on impact reporting, this report primarily covers the first definition – i.e. that issuers shall report on use of proceeds. While impact reporting is not mandatory in any guidelines, it is increasingly being seen as best practice. Page 9 presents a discussion of impact reporting.

Throughout this study, the term 'reporting' is used to refer to publicly-available information in English or in the local issuer language. We used the tools available to any investor, market commentator or member of the public to analyse reporting. We also attempted to contact all issuers where we were unable to find reporting. It is possible that other reporting may be made available to investors only – this was not assessed here but may be a feature of future publications.

Methodology

We collected data from 146 issuers and 191 bonds issued up to 1 April 2016. Given that most guidelines require annual reporting, we allowed time for a year and two months to lapse with a grace period for reporting to be made public.

Supranational and regional development banks were not included in our dataset as there is consensus amongst stakeholders that these institutions are trusted and are already reporting well. The risks associated with greenwash and lack of transparency are therefore likely to be low. However, as there has been a growing concern around these risks in the corporate market since the first corporate green bond was issued in 2013, this study aims to provide a clearer picture of this market segment, along with sub-national issuers.

Exclusions

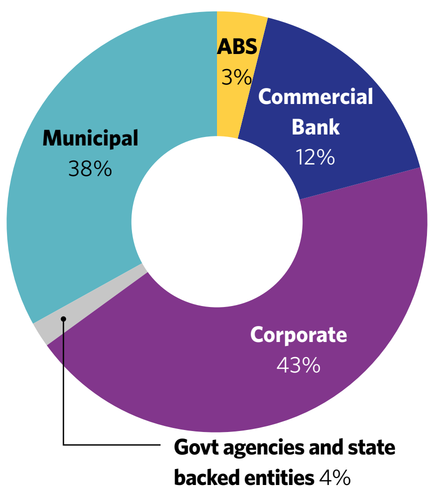
- Supranational institutions
- Regional/multilateral development banks
- Unlabelled climate-aligned bonds[1]

Inclusions

- Bonds labelled 'green' or similar by issuer
- Listed and unlisted bonds
- Private placements
- Municipals, sub-sovereigns and corporates
- Outstanding bonds only
- Bonds in line with the Climate Bonds Taxonomy

Cut-off date: issue date before 1 April 2016

Dataset breakdown: Issuer type



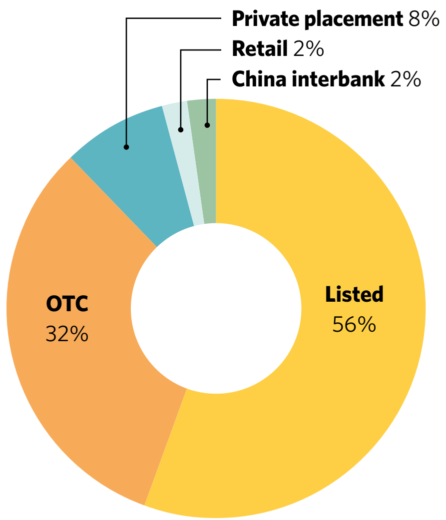
Information sources: Issuer website, ICMA website, Second opinion provider website, EMMA database, News sources, Climate Bonds database, Exchanges.

Breakdown of dataset

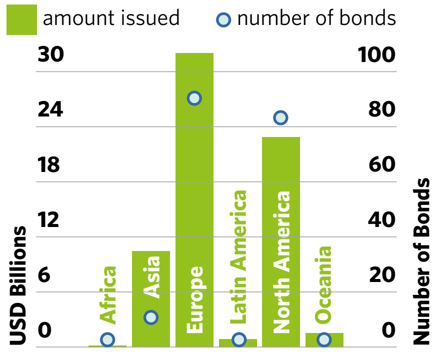
- Number of issuers: 146
- Number of bonds: 191
- Amount issued: USD66bn

All information was sought on a best efforts basis using an extensive range of translation and search tools.

Dataset breakdown: Listing



Dataset breakdown: Regions



Key reporting frameworks

Why is reporting important

Post-issuance reporting is a core element of the Green Bond Principles, the Climate Bonds Standard and other guidelines. Post-issuance reporting is critical to ensure the integrity of the market.

Market accountability not only rests on promises made at issuance but also on how these are followed up on during the life of the assets or projects financed. By reporting, issuers have a unique opportunity to engage with bondholders, potential investors and other market participants by showing the positive climate impact that has been achieved through the green bond.

In order to assess what constitutes 'good' reporting we used market guidelines and standards from around the world as a baseline. While the guidelines differ, they contain common requirements and recommendations which are summarised in the table below.

The following market standards and guidelines were used as baseline reporting frameworks:

- Green Bond Principles[2]
- Climate Bonds Standard[3]
- Country guidance
  - People's Bank of China Green Bond Guidelines and Endorsed Project Catalogue[4]
  - Securities Exchange Board of India (SEBI) guidelines for Green Debt Securities[5]
  - Ministry of Japan Green Bond Guidelines[6]

Summary of key reporting frameworks

	Green Bond Principles	Climate Bonds Standard	Country guidance
1. Reporting frequency	Annual	Annual	PBoC: quarterly SEBI: annual Japan: annual
2. Availability of reporting	'Readily available'	Mandatory to bondholders and Climate Bonds Standard Secretariat Public reporting encouraged	PBoC: disclose 'to the market' quarterly,report to the PBoC annually SEBI: public with annual and quarterly financial results Japan: public
3. Location of reporting	• Annual report and accounts • Annual sustainability reporting • Separate section of website • Investor letter • Separate green bond report	• Annual report and accounts • Annual sustainability reporting • Separate section of website • Investor letter • Separate green bond report	PBoC: not specified SEBI: 'along with annual report and financial results'
4. Period of reporting	Until allocation is complete	For the life of the bond	PBoC: duration of the bond Japan: until full allocation SEBI: not stated
5. Use of proceeds information to include	Mandatory: Broad categories and % allocated to each Recommended: • List of projects and assets if not commercially sensitive • Description of projects • Expected impact of projects	• Nominated assets and projects detailed in full 'in line with confidentiality agreements' • Percentage of refinancing • Description of projects • Expected impact of projects	SEBI and Japan Broad categories and % allocated Recommended: List of projects and assets if not commercially sensitive; description of the projects; expected impact of projects PBoC: Proceeds allocation; assessment to green projects (recommended); associated environmental benefits(recommended)
6. Allocation information	• Amount allocated to projects • Percentage of bond to refinancing	• % of bond allocated to date • Percentage of bond to refinancing • Details of unutilized proceeds	SEBI: details of unallocated proceeds Japan: details of unallocated proceeds PBoC: amounts allocated
7. External verification	Recommended	Recommended	SEBI: mandatory PBoC: recommended

Overall findings

Availability of reporting

We defined 'reporting' as a binary field where 'Yes' indicates that we were able to find some public information about use of proceeds after issuance and 'No' indicates that we were not able to find anything at all.

The majority of issuers provided some degree of public information after issuance with 74% of bonds complying (by number of bonds) or 88% by value. For this first measure, by 'complying', we recorded 'Yes' for all bonds where we found basic reporting on use of proceeds that was published post-issuance. Level of detail and complexity varied widely – this is discussed in later sections.

Who is reporting?

There is high availability of public reporting from government agencies and commercial banks, while reporting is lower from corporates, sub-sovereigns, asset-backed securities. Possible reasons for this are outlined at the end of this section.

Of the 30% of corporate bonds for which reporting was not found, almost a third are private placements. Taking private placements out of the whole dataset would boost reporting to 78%.

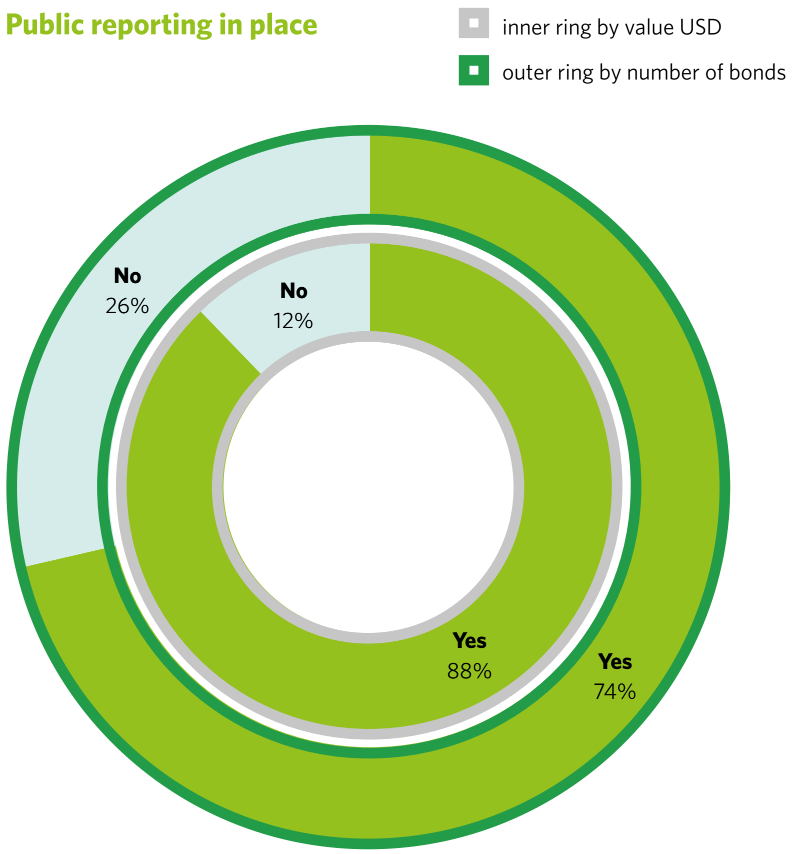
Most listed bonds are reporting while the OTC market and private placement market have lower levels of reporting.

This raises the question - is reporting necessary for all types of bonds?

None of the regional or market guidelines have any specific provision for private placements. For private placements, information is generally more difficult to find and we would expect the investors who have participated to be active in asking issuers for reporting or in being confident about the use of proceeds. However, if the issuer has used the publicity of issuing a green bond to boost its reputation, it should also report publicly. We note that for private placements where reporting is available, this is generally a very simple disclosure such as a public investor letter confirming funds' allocation.

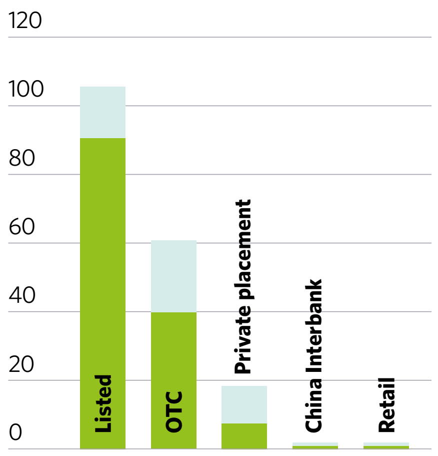
All bonds over USD1bn in size had reporting available, while 85% bonds of USD500m-1bn in size have reported and the lowest in bonds of less than USD100m. Not surprising, given that smaller issuers and bonds sizes may go hand in hand with fewer resources available to support reporting.

Public reporting in place



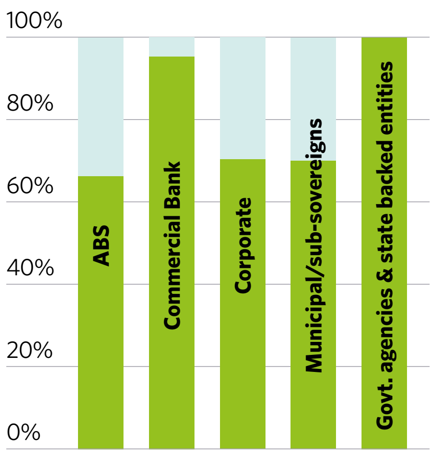
Listing and reporting

(measured by number of bonds)



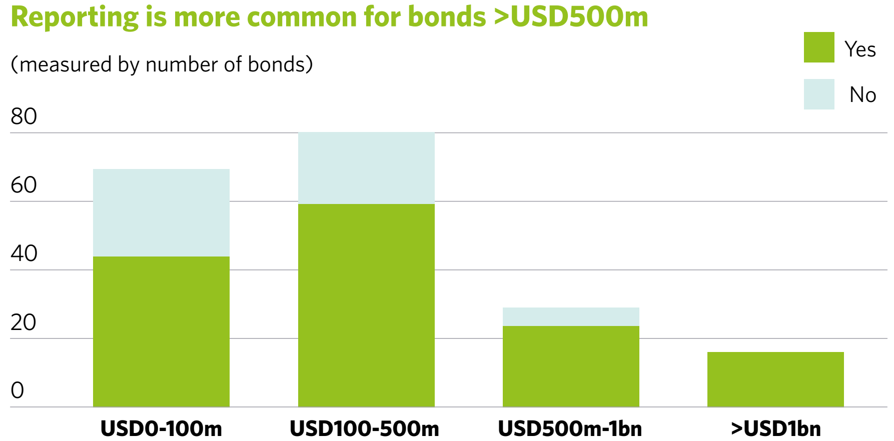
Reporting by issuer type

(measured by number of bonds)



Reporting is more common for bonds >USD500m

(measured by number of bonds)



Trends of reporting by country of the issuer

Reporting tends to be higher in countries where more bonds have been issued and there are best practice examples to follow. The largest countries of issuance in the dataset were the U.S., Sweden, France and Germany.

United States: Reporting in the U.S. was low by number of bonds compared to most European countries. This was primarily because of lower levels of reporting in the U.S. muni market. Corporates and commercials banks were generally in line with their peers in other markets.

Sweden was the second largest country of issuance in our sample and demonstrated best practice in the market with over 85% (by number of bonds) having public reporting available.

France: 84% (by number) of French bonds had reporting in place and although this was lower than in some other Western European markets, quality of reporting tended to be high.

China: While issuance up to April 2016 had been quite limited (shortly thereafter China would become the largest source of issuance by value in 2016), Chinese issuers were already demonstrating best practice with reporting found for 80% of bonds (by number).

Why isn't reporting happening?

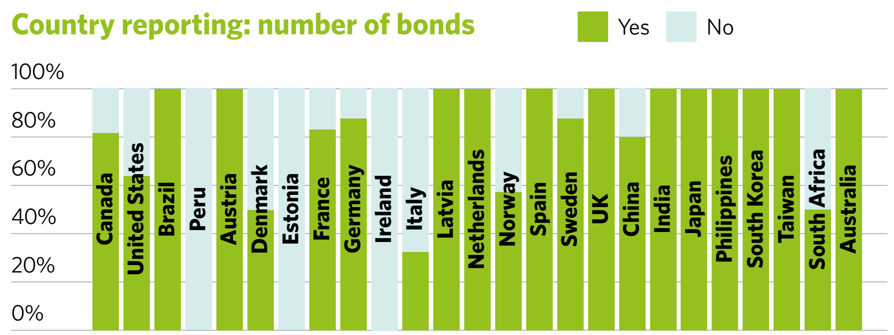
While we can only hypothesise as to the reasons for a lack of reporting, the following are most often cited or likely:

Allocation is complete at issuance

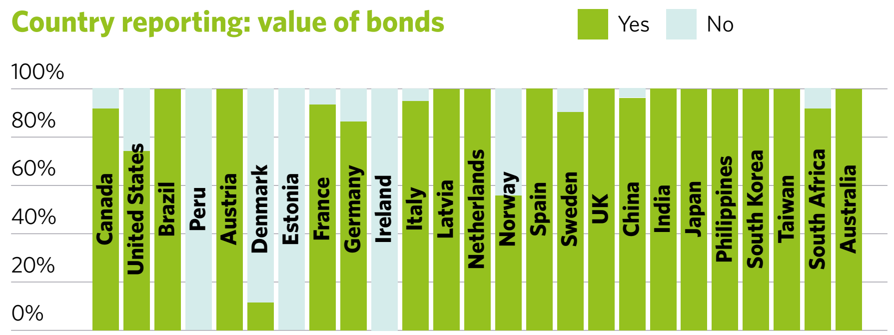
The most likely reason for not reporting is that all proceeds are allocated at issuance to the refinancing of existing projects rather than new projects. This is allowable under the Green Bond Principles, but not under all market standards (Climate Bonds Standard and PBoC require reporting for the life of the bond). This is common in ABS, where loans are determined at issuance, as well as in the US muni market, where refinancing is common.

For ABS, underlying asset pools are usually composed of a large number of small and liquid assets - this in turn may increase the complexity of reporting on the allocation of proceeds.

Country reporting: number of bonds



Country reporting: value of bonds



Private placements

As previously noted none of the guidelines gave any guidance for private placements. However, if the issuer has used the publicity of issuing a green bond to boost its reputation, it should also report publicly. Of the non-reporting bonds, one-fifth were private placements.

Issuance was before GBP

A few bonds in our data set were issued prior to the release of the Green Bond Principles, before reporting was accepted as best practice. 2 out of the 49 non-reporting bonds we surveyed were issued prior to the GBP.

Pure-play bonds financing general corporate purposes

Five bonds in our sample labelled as green were issued by pure-play 'green' companies for general corporate purposes, with the rationale that all activities are green. These bonds do not have any separate green bond reporting, as the issuers consider general sustainability reporting to cover the green bonds.

Reporting is not public

In a few cases, we were not able to find reporting, but issuers had clearly committed to reporting to investors directly through an investor letter. It is possible that reporting exists without it being public.

U.S. Municipalities

We found that in general U.S. municipalities are under-reporting compared to the market. Or they are reporting but information is difficult to locate or not specific to the green bond but rather the issuer as a whole. There may be other reasons specific to this issuer segment.

Taxpayer funds for optional extras – US municipalities lag behind best practice in both external reviews at issuance and reporting post-issuance. One reason given is the reluctance to spend taxpayer funds on optional extras such as reviews and reporting when the bond can be issued successfully without. While this is not a reason raised by sub-sovereign issuers in other parts of the world, it is frequently cited in the US, particularly by smaller issuers and is a valid concern. Many municipal issuers do not commit to reporting or state that they are in line with the GBP at issuance.

Transaction sizes are smaller in the US muni market – the average bond size for non-reporting munis was USD106m while the average bond size in the dataset as a whole was USD347m.

Municipalities are seen as trustworthy as the market is well-established with frequent issuance and an established investor base. Many of the issuers are pure-play in areas such as clean water or public transport, so investors may not require a high level of disclosure. Further, municipalities have legal obligations around auditing which many issuers see as sufficient guarantee of credibility.

Best practice: a template for good reporting

Structure of reporting

Of the bonds we analysed, 74% provided post-issuance reporting. The findings below outline some characteristics of this reporting.

Note that all analysis below is for bonds where we found reporting only.

Recommendation: reporting takes place at least annually

Findings

The majority of bonds reported at least annually.

4% of bonds we reviewed had quarterly reporting, most of which were Chinese bonds given that PBoC guidelines require that the issuer disclose the use of proceeds to the market on a quarterly basis.

For bonds with one-off or sporadic reporting, we could find usually only one report that was out of date, meaning we are uncertain as to future reporting plans.

Recommendation: reporting is up to date

Findings

While there is no agreed definition of 'up to date' in the market yet, we used 400 days from when the bond was issued. This seems as a reasonable indicator to us, as it leaves enough time for reporting to be completed and uploaded.

We found that 59% of reporting is up to date using a 400 day definition. This indicates that 41% of all bonds with reporting are failing to meet basic requirements around annual reporting.

Recommendation: reporting is public and easy to find

Findings

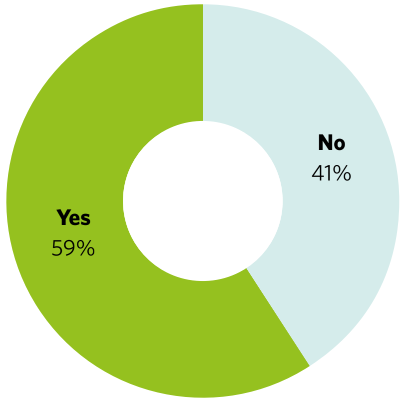
The majority of reporting was provided in a separate green bond report or letter to investors, with relatively few issuers including the reporting in the annual report alone.

A separate green bond report is usually much easier to find, so it may be preferred. However, as no hierarchy of reporting format or location is given in any of the market guidelines, reporting in annual reports or CSR/sustainability reports is sufficient.

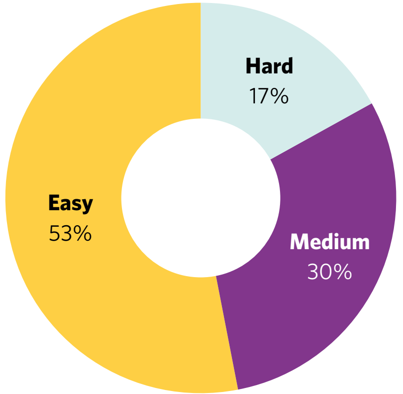
Most issuers had some information available in English due to the international nature of the investors base. The exception to this was the Chinese market where a large proportion of bonds are issued for the domestic market only.

Reporting is up to date

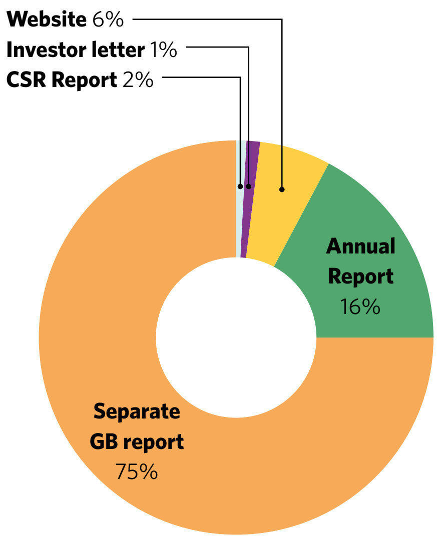
(within 400 days since issuance)



Ease to find reporting

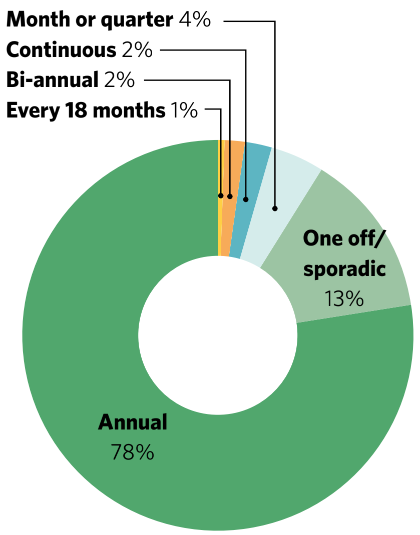


Location of reporting*



* Some issuers disclose information in multiple places including on their own website as well as a green bond report. For this chart, we show where the primary and most detailed reporting is. If there is reporting on the website, but in-depth analysis is to be found in a separate GB report, we have put it under 'Separate GB report'.

Frequency



Best practice examples

ABS: Toyota

provides monthly updates on loans made - while monthly reporting is far beyond requirements, it is helpful in Toyota's case given the rapidly changing nature of loan volumes.

Small issuer: Belectric

provides an annual letter to bond investors and the Climate Bonds board confirming that the projects to which finance was allocated to on the date of issuance remain owned by the company.

Corporate: Iberdrola

provides a detailed table for each bond with all the project names, their allocation, impact and other information such as the installed energy capacity.

They provide an annex of all the details (allocated amount, projects, subcategories for each project, environmental benefits) of each green bond. They also have an external independent assurance report.

Corporate: EDF

The post-issuance report from EDF was published as a separate, dedicated green bond summary piece located in the 'Green Bond' section of the investor page of the website. Information is available in French and English.

Content of reporting

Bond information and allocation

Recommendation: reporting should include a list of bonds issued to date with the amount (or percentage) that has been allocated to date from each bond.

Reporting on an aggregated bond program level or individual bond level are both acceptable as long as the issuer shows its issuance program to date – number of bonds, amount issued etc.

Findings

Information was generally adequate on how much of a bond had been allocated, with less than 10% of bonds having no information on allocation. The majority of bonds for where there is information allocate all proceeds within a relatively short time frame, with almost all proceeds from 2013 and 2014 bonds being fully allocated.

Category-level information disclosed

Recommendation: Reporting should include information (graphical if possible) on the percentage of proceeds that have been allocated to different project types.

Findings

Almost all issuers provided charts or figures showing how proceeds were allocated to different project types.

Over 85% of all bonds had category or project-level information available. Issuers used a range of categories including their own project types or those defined by the GBP, Climate Bonds Standard or country-level guidelines.

To date, the majority of proceeds have been directed to renewable energy projects with transport and buildings/efficiency projects also accounting for a large proportion.

This is different to the market as a whole, where renewable energy accounts for a larger proportion due to large renewable energy investment programs from development banks.

As well as allocation to broad projects, for some project types, issuers should show the proportion of projects that met the criteria defined in the green bond framework. This can be particularly useful in categories such as buildings where they may use different criteria (see Berlin Hyp example in text box).

In addition to project type disclosure, some issuers provided other useful summary information such as how proceeds were distributed across different countries or regions, technology types (e.g. wind and solar) or climate goal (e.g. mitigation or adaptation).

Best practice examples

Municipals: DC Water

provides a table showing amount raised per year from each bond as well as the amount drawn per year per bond.

Kommuninvest

provides useful context in its reporting by showing how much it has committed to its overall green bond programme, amount issued to date and what is still outstanding.

California State

provides charts detailing what percentage of total proceeds raised have been disbursed to date.

Bank: ANZ Bank*

provides a table showing amount raised per year from each bond as well as the amount drawn per year per bond.

City: Gothenburg

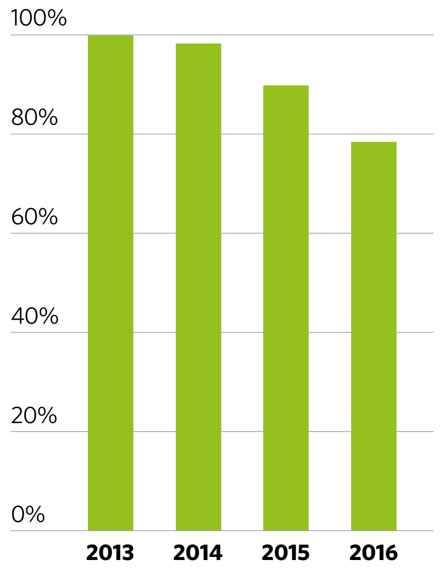
displays charts showing how proceeds are allocated across broad projects types as well as a chart showing how proceeds are allocated across mitigation, adaptation or general environment projects.

Corporate: Berlin Hyp*

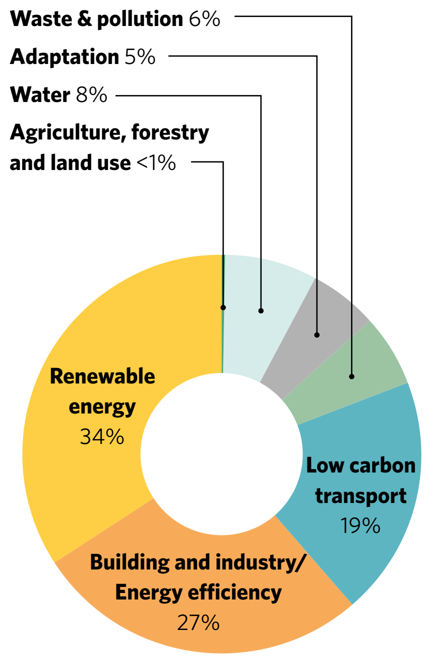
issued the first green Pfandbrief in 2015. Its comprehensive reporting includes charts to show what proportion of its green portfolio meet the different levels of building certification and which standard they have been certified against. All information can be found from a dedicated green Pfandbrief web page.

*Climate Bonds Partner organisation

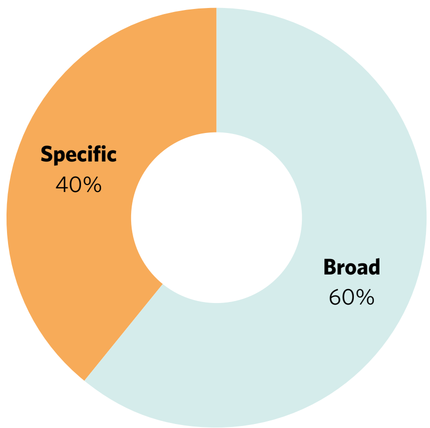
Average % proceeds allocated by year of issuance



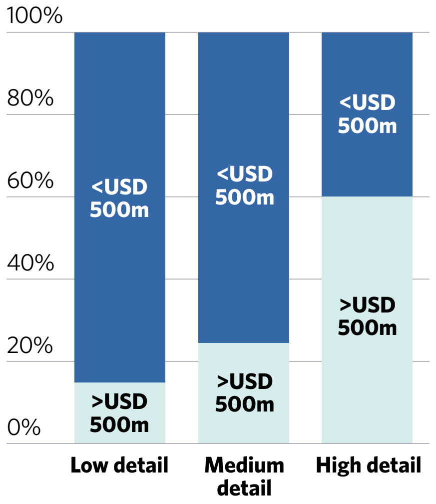
Proceeds disbursed to date



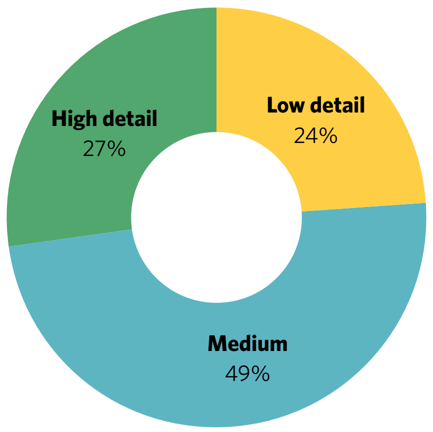
Broad project categories or specific projects disclosed



Quality of reporting by bond size



Breakdown of reported bonds per level of disclosure



Individual project information and description

Recommendation: Where possible, issuers should provide project-level information as well as the amount allocated to each project.

Findings

We found that 40% of bonds had project level information (Specific) included in reporting.

The other indicator "broad" refers to general category-level disclosures such as renewable energy, energy efficiency, low carbon transport, waste and pollution, water etc. But we recommend that specific project level information should be further reported.

Useful project-level information includes:

- Name of project, description of project
- Type of project and technology
- Amount allocated to this project
- Status of the project (e.g. under construction, complete, new etc.)

Refinancing and new project information

Recommendation: Issuers should provide information about what proportion of funds has been used to refinance existing projects.

Findings

In general, there was very little clear information about the percentage of each bond that is refinancing existing projects vs financing new projects. Over 70% of bonds provided no clear information on this metric.

This is a clear breach of most market guidelines including the Climate Bonds Standard and Green Bond Principles which recommend that this is reported clearly.

Best practice examples

Bank: **HSBC***

provides a detailed table with all projects names, a description for all, allocation of proceeds per project, impact reporting and other information such as the location of each project.

*Climate Bonds Partner organisation

Bank: **Agricultural Bank of China**

provides a table with all categories names and amount of proceeds allocated. Meanwhile, examples of typical projects under each category are also disclosed by geographical location and technologies and processes used.

Muni: **Central Puget Sound Transit Authority**

provides a section on Green Bond reimbursement allocation, disclosing projects that are reimbursed by the non-refunding proceeds, as well as a list of projects allocated to refinancing portion of green bonds, providing detailed information on the (internal) project code, project category, project name, project description, geographic location, and amount allocated.

Auditing

All guidelines state that having post-issuance reporting to be audited or reviewed by a second party opinion provider is optional or recommended.

Our research indicates that 39% of bonds make use of an auditor. This includes the Province of Ontario whose green bond newsletter is verified by the Auditor General of Ontario.

Summary findings

Using the indicators of good reporting defined above, we created a summary indicator measuring the level of reporting disclosure. This defines each bond as either:

Light detail: light reporting, with at least the disclosure of proceeds percentage allocation per category.

Medium detail: some level of detailed information, with some project names or examples, project allocation of proceeds, as well as some impact reporting.

High detail: with all project names, project descriptions, allocation of proceeds, percentage of refinancing versus new investment, as well as detailed impact reporting available.

Of the bonds surveyed, 27% had highly detailed disclosure with bonds larger than USD500m having more detailed disclosure than smaller bonds.

We note, that more detail is not necessarily good detail. For some bonds with proceeds allocated to one project type or few projects, detailed reporting information is not necessary.

A more detailed discussion about this is in the next section on impact reporting.

Impact reporting

Findings

Of the bonds where reporting was found, 38% included some level of impact reporting - the percentage is increasing year by year.

What is impact reporting?

The term 'impact reporting' is used to define any type of reporting that seeks to quantify the climate or environmental impact of a project/asset numerically. Impact reporting can be very helpful to investors as they seek to measure the positive externalities through their investments.

Impact reporting is gaining prominence in the green bond market. Many market commentators see it as increasingly important as the issuer base widens - across geographic regions, across ratings bands, and as the asset base widens from the mainstays of renewable energy to fossil fuel companies.

However, for many it remains a burdensome task that could have the potential to shy issuers away from the market. This section explores the topic of impact reporting and its usefulness in the market.

Are numbers always useful?

While numbers can be useful, they can also be misleading without a baseline or benchmark. For example - how much is a million tons of carbon saved or a million tons of water cleaned? Without baselines, numbers on their own can be meaningless.

Big numbers do not always imply high impact when one does not know the local or sector context. Fossil fuel plants are a classic example where efficiency measures can reduce huge amounts of emissions, but also tend to extend the life of a plant – leading to entrenchment of a technology that is not in line with a low carbon economy.

There can also be a mismatch between the life of the bond and the life of the projects' operation. Absolute metrics do not always allow for the distinction between impact over the life of the bond vs impact over the life of the project as these are usually not the same.

Should everyone have to provide impact reporting?

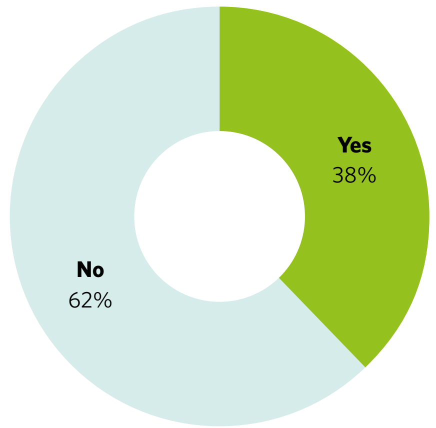
While impact reporting is increasingly seen as the best of best practice, investors have been cautious to expect impact reporting for all types of issuers and all types of projects. In particular, smaller issuers with small bond programs are not generally expected to provide impact reporting because of the resources that it takes to produce.

Further, in 'easy' sectors like wind power or solar power, the call for impact reporting is not as strong. Comparatively, applying clear metrics in other sectors such as the built environment can help differentiate an efficient building from conventional ones.

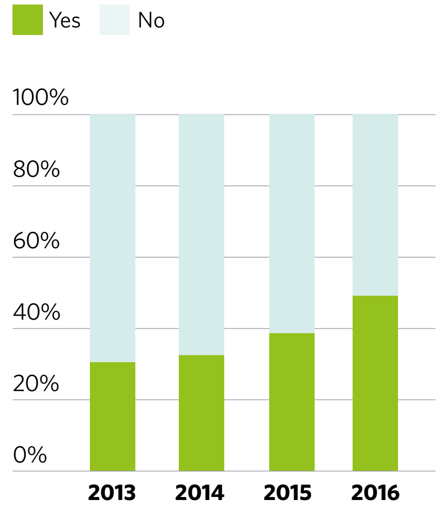
A wide range of metrics is being used

There is currently very limited consistency between metrics used in impact reporting. For example, for greenhouse gas emissions some issuers report on net savings while others use intensity, and data varies from totally to monthly to bi-annual. The diagram above shows some of the most widely used metrics. If impact reporting is to become the norm, a more consistent group of metrics will be required.

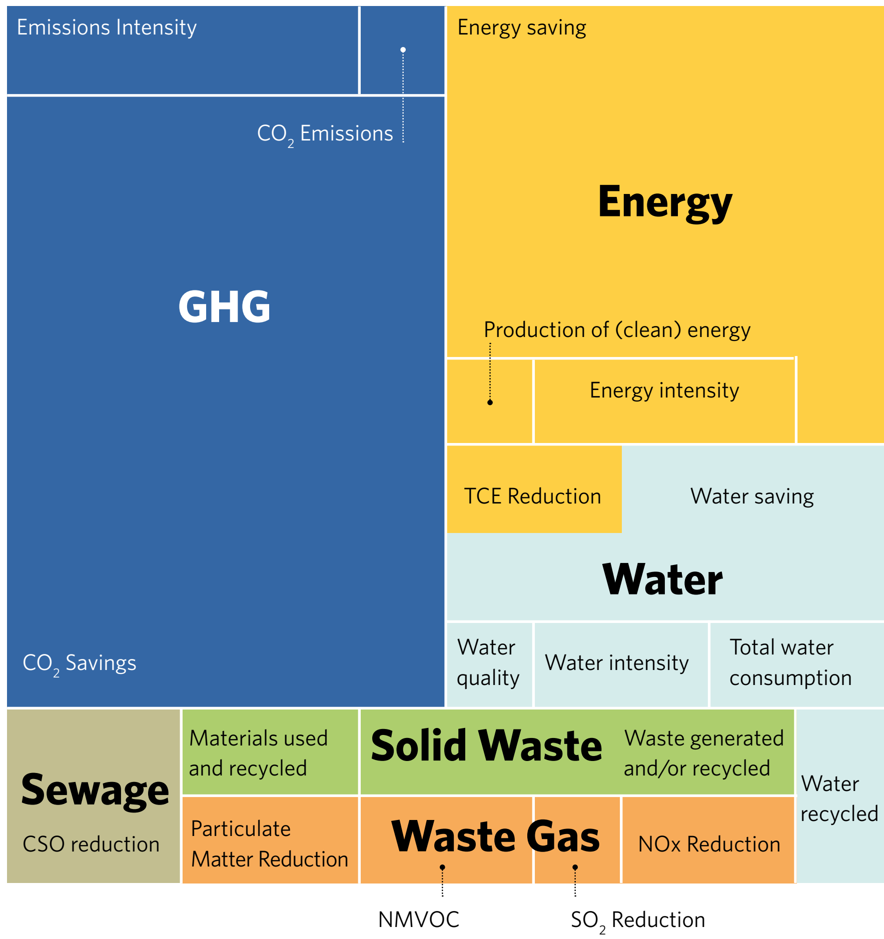
Impact reporting is in place for 38% of bonds



Impact reporting is increasing year on year



A wide range of metrics is being used



Impact reporting: A framework for best practice

Impact reporting is not required by any market guidelines. Further, investor expectations on impact reporting vary widely with some prefering impact reporting in all circumstances and others not requiring or encouraging any quantitative or impact reporting. Given the inherent tension between detailed impact reporting and overly complex requirements and the lack of guidance on who should be providing impact reporting, this section provides some guidance on balanced impact reporting.

Focus on specific sectors

While impact reporting is useful across all sectors, it may be more relevant for some sectors than others. For example, buildings themselves are not 'green' or 'low carbon' assets. Instead, a building can be called green if it achieves certain energy efficiency metrics and certification. In this case, the metrics are what enable investors to define which buildings are green and which are not, with impact reporting holding the key to this call.

For solar power, on the other hand, the technology itself is 'green' and the energy saving metrics are not required to differentiate one solar plant from another. Here, impact reporting metrics are nice to have but not critical to understanding the environmental credentials of the asset.

Manage expectations for smaller issuers

Large issuers like development banks and corporates should be driving best practice in the green bond market – both at issuance and after. This includes impact reporting.

However, the same level of detail should not always be expected of smaller, less-frequent issuers with limited resources. Impact reporting can be time consuming and resource-intensive.

Smaller issuers may focus research on providing basic but sufficient information to give investors confidence about how proceeds are being allocated and add impact reporting where possible or necessary.

Use benchmarking to make reporting more comparable

Comparability and context of impact reporting metrics is a key challenge for their usefulness. Issuers should consider which benchmarks they can use to contextualise reporting within:

- the company (e.g. within wider emissions or savings targets)
- the sector
- the geographic region
- climate goals.

Categories where quantitative impact reporting is necessary (given variable levels of green impact)	Categories where quantitative impact reporting is useful (given inherent greenness of the asset)
Renewable energy: - geothermal - bioenergy - hydropower	**Renewable energy:** - solar - wind
Transport: – fuel-efficient vehicles – BRT tranport – water transport – alternative fuel vehicles	**Transport:** – electrified mass transport infrastructure – electric vehicles – electric vehicle charging infrastructure
Waste management: – disposal – pollution control technology – recycling – reuse – prevention	**Adaptation infrastructure**
Nature-based assets: – forestry – agriculture – fisheries	
Water: – infrastructure – water-saving technology	
Industrial energy efficiency	
Low carbon buildings: – residential – commercial – retrofit	

Best practice example

Corporate: **Berlin Hyp***

uses two baselines to benchmark the performance of its buildings:

1. The average energy performance of existing European buildings. This means that every building in the pool is compared to the average energy performance of existing European buildings. Against this baseline, Berlin Hyp buildings perform very well.

2. The current energy references for different real estate asset classes according to the German Energy Savings regulation (Energieeinsparverordnung, EnEV). This baseline gives a more conservative assumption of carbon emissions that Berlin Hyp has avoided.

*Climate Bonds Partner organisation

Recommendations and actions

The research and data conducted for this report indicates that while reporting is taking place in the market, much improvement needs to be made for the market to maintain its integrity, particularly in the following areas:

1. Poor comparability

Reporting varies widely across issuers both in content and format. While issuers have their own reporting style and context, the range of reporting makes it difficult to compare and evaluate reporting across issuers or sectors.

2. Meeting recommended guidance

While reporting is good in some areas, reporting fails to meet some basic market guidelines. In particular:

- Percentage of proceeds allocated to refinancing and new projects
- Project-specific information
- Allocation of proceeds througout the life of the bond
- How projects are in line with Green Bond Framework
- Timelines of reporting

3. Failure to report

While in the minority, there is still no reporting for around a quarter of bonds analysed - we hope to see this drop to almost zero in future reports. In particular, smaller issuers, private placements and U.S. municipal issuers reporting was lower than banks and government agencies. While reporting is less important for some assets or issuer types, all issuers should provide at least a basic level of reporting.

Footnotes:

1. Unlabelled climate-aligned bonds are bonds which are financing green assets but are not labelled by the issuer – these are covered in the annual State of the Market report but are not included in this publication as they do not report post-issuance.
2. https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-social-and-sustainability-bonds/
3. https://www.climatebonds.net/standards/standard_download
4. http://www.greenfinance.org.cn/displaynews.php?id=468
5. http://www.sebi.gov.in/legal/circulars/may-2017/disclosure-requirements-for-issuance-and-listing-of-green-debt-securities_34988.html
6. https://www.env.go.jp/en/policy/economy/gb/guidelines.html
7. http://treasury.worldbank.org/cmd/pdf/InformationonImpactReporting_V.1.pdf

For issuers

- **Small issuers/ Private placements/ unlisted bonds**:

  It is best practice for all issuers to report regardless of their size or listing. Issuers with fewer resources shoud focus on basic standardised reporting using examples from other issuers where relevant.

- **Large/frequent issuers**:

  should show leadership in best practice going beyond basic reporting to include more detailed informaion and, possibly, impact reporting.

- **Base reporting on market guidelines**:

  Guidelines such as the Green Bond Principles are frequently used at issuance to inform the content and structure of reporting (e.g. most frameworks are structured in line with the four principles of the GBP). However, in post-issuance reporting this is less common which adds to the wide variety of structures and content of post-issuance reporting. Market guidelines should be better utilised to inform post-issuance reporting.

- **Take examples from development banks and other leaders:**

  There is already a wealth of resources available to issuers in the form of reporting from other leading issuers such as development banks.

  In particular, for issuers aiming to provide impact reporting, ten international financial institutions including the World Bank, EIB, IFC and KfW have been working towards a harmonized framework for impact reporting providing guidance for better impact reporting[7].

For regulators/ standard-setters

- **Clearer expectations from market guidelines**

  One finding that became apparent during the research phase of this report is that while market guidelines have clear expectations of issuer disclosure at the point of issuance, it is not clear if the same or different disclosure is expected following issuance.

  Market guidelines, lisiting requirements and green bond regulations could promote good reporting by having clear guidance on what constitutes good reporting.

The Luxembourg Green Exchange (LGX) is entirely dedicated to green, social and sustainable securities. It makes post-issuance reporting on the use of proceeds a mandatory requirement and verifies compliance a year after listing. The platform also encourages impact reporting by displaying impact information in dedicated security cards for those securities that can show some measures of impact behind projects.

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- **Database of reporting**

  To increase investor access to reporting, a reporting library or database would be helpful to ensure that all reporting is in place, on time and very easy for issuers to access.

  Possible hosts of a reporting library could include ICMA and the Green Bond Principles, Climate Bonds Initiative, exchanges and/or regulators.

- **Template for basic reporting**

  Regulators or standard setters could assist in the development of the market by publishing a basic reporting template or checklist that issuers can use when putting together reporting. This may also bring down the cost of reporting resources, which are necessary for issuers who can make use of template tools to standardise reporting.

Appendix 1: Guidelines used to determine summary recommendations for reporting

Green Bond Principles

Issuers should make, and keep, readily available up to date information on the use of proceeds to be renewed annually until full allocation, and thereafter in the event of new developments. This should include a list of the projects to which Green Bond proceeds have been allocated, as well as a brief description of the projects and the amounts allocated, and their expected impact. Where confidentiality agreements, competitive considerations, or a large number of underlying projects limit the amount of detail that can be made available, the GBP recommend that information is presented in generic terms or on an aggregated portfolio basis (e.g. percentage allocated to certain project categories).

The Climate Bonds Standard

Information is required to cover:

- Nominated projects and assets should be detailed in full
- Use of proceeds:
  - disclosed and allocated within 24 months
  - state percentage of refinancing
- Reporting should be at least annual

People's Bank of China

The following is relevant for bonds from Chinese issuers:

- The issuer must invest proceeds within the timeframe prescribed in the prospectus.
- The issuer must disclose the use of proceeds to the market on a quarterly basis.
- The issuer must disclose the annual report on use of proceeds, special auditor's report from last year and use of proceeds in Q1 of the year before April 30 every year.
- In the green financial bond duration, the issuer shall be encouraged to disclose assessment report issued by the independent professional assessment or certification agency to the market, and to conduct follow-up assessment to the green projects supported by green financial bonds and associated environmental benefits.

Securities Exchange Board of India (SEBI) Guidelines

An issuer who has listed its Green Debt Securities under SEBI Regulations needs to provide the following disclosures along with its annual report and financial results:

a. Following shall be provided along with the half yearly and annual financial results:

i. Utilisation of the proceeds of the issue, as per the tracking done by the issuer using the internal process as disclosed in offer document/disclosure document.

The utilisation of the proceeds shall be verified by the report of an external auditor, to verify the internal tracking method and the allocation of funds towards the project(s) and/or asset(s), from the proceeds of Green Debt Securities

ii. Details of unutilized proceeds

b. Following additional disclosures have to be provided along with annual report:

i. List of project(s) and/or asset(s) to which proceeds of the Green Debt Securities have been allocated/invested including a brief description of such project(s) and/or asset(s) and the amounts disbursed. However, where confidentiality agreements limit the amount of detail that can be made available about specific project(s) and/or asset(s), information shall be presented about the areas in which such project(s) and/or asset(s) fall into.

ii. Qualitative performance indicators and, where feasible, quantitative performance measures of the environmental impact of the project(s) and/or asset(s). If the quantitative benefits/impact cannot be ascertained, then the said fact may be appropriately disclosed along with the reasons for non-ascertainment of the benefits/impact on the environment.

iii. Methods and the key underlying assumptions used in preparation of the performance indicators and metrics.

Ministry of Environment, Japan

- After issuance of a Green Bond, issuers should disclose publicly up to date information on the use of Green Bond proceeds.
- The disclosure should be made at least once a year until full allocation of the proceeds, and as necessary thereafter in the event of new developments.
- Disclosed information should include the following items.
  - A list of Green Projects to which Green Bonds proceeds have been allocated
  - A brief description of each Green Project (including up-to-date progress)
  - The approximate amount allocated to each Green Project
  - The expected environmental benefits of each Green Project
  - Information on unallocated Green Bond proceeds (The approximate amount of the unallocated proceeds or the share of the amount of the unallocated proceeds to the total amount of the proceeds, when the unallocated proceeds are expected to allocate to Green Projects, and how the unallocated proceeds will be managed until allocation)
- In case that Green Bond proceeds have been allocated to refinancing of existing projects, it is recommended that disclosed information include 1) the approximate amount (or the share) of the allocated proceeds to refinancing, and 2) a list of the Green Projects (or the project categories) refinanced.
- It is recommended that the disclosure be made on a project-by-project basis. In case it is difficult, for example due to confidentiality agreements, the disclosure can be made on an aggregate basis.
- Issuers should use appropriate indicators consistent with characteristics of the Green Projects etc. when disclosing information on environmental benefits.
- It is recommended that issuers, where feasible, use quantitative indicators and disclose information on methodologies and/or assumptions as well as these indicators in the quantitative determination.

Appendix 2: Reporting data

The online version of this report contains hyperlinks to reporting sources.

Name	Reporting source	Impact reporting	Issuer type	Country
500 Georgia Office Partnership (TELUS)	Issuer website	N	Corporate	Canada
Abengoa Greenfield	Issuer website	Y	Corporate	Spain
ABN AMRO	Issuer website	Y	Commercial Bank	Netherlands
Advanced Semiconductor Engineering (ASE)	Issuer website	Y	Corporate	Taiwan
Agricultural Bank of China	Issuer website	Y	Commercial Bank	China
ANZ Bank	Issuer website	N	Commercial Bank	Australia
AP Renewables	Internal Doc.	N	Corporate	Philippines
Apple INC	Stock exchange	Y	Corporate	United States
Bank of America	Issuer website	N	Commercial Bank	United States
Bank of Qingdao	Xinhua Database	N	Commercial Bank	China
Belectric	Climate Bonds website	N	Corporate	UK
Berlin Hyp	Issuer website	Y	Commercial Bank	Germany
BKK	Issuer website	N	Corporate	Norway
BPCE	Issuer website	Y	Commercial Bank	France
BRF SA	Issuer website	Y	Corporate	Brazil
California State	Issuer website	Y	Municipal	United States
Central Puget Sound Transit Authority	Issuer website	N	Municipal	United States
City of Gothenburg	Issuer website	N	Municipal	Sweden
City of Johannesburg	No public link available yet	Y	Municipal	South Africa
City of Los Angeles	EMMA database	N	Municipal	United States
City of Oslo	Issuer website	N	Municipal	Norway
City of Paris	Issuer website	Y	Municipal	France
City of St Paul	Issuer website	N	Municipal	United States
City of Tacoma	EMMA database	N	Municipal	United States
CLP Wind Farms India	No public link available yet	N	Corporate	India
Colorado University	EMMA database	N	Municipal	United States
Commonwealth of Massachusetts	Issuer website	N	Municipal	United States
CoPower	Issuer website	Y	Corporate	Canada
Crédit Agricole CIB	Issuer website	N	Commercial Bank	France
Département de l'Essonne	Issuer website	N	Municipal	France
Digital Realty Trust	Issuer website	N	Corporate	United States
District of Columbia Water	Issuer website	Y	Municipal	United States
DNB Bank	Issuer website	Y	Commercial Bank	Norway
East Central Wastewater - Florida	EMMA database	N	Municipal	United States
EDF	Issuer website	Y	Corporate	France
Engie	Issuer website	Y	Corporate	France
Fastighets AB Forvaltare	Issuer website	N	Corporate	Sweden
Fortum Varme	Issuer website	Y	Municipal	Sweden
Georgia Power Company	Issuer website	N	Corporate	United States
Hawaii State	EMMA database	N	Municipal	United States
Hera SpA	Issuer website	N	Corporate	Italy
Hero Future Energies	Climate Bonds website	N	Corporate	India
HSBC	Issuer website	Y	Commercial Bank	France
Hyundai Capital Services	No public link available yet	Y	Corporate	South Korea
Iberdrola	Issuer website	Y	Corporate	Spain

Name	Reporting source	Impact reporting	Issuer type	Country
Île-de-France	Issuer website	Y	Municipal	France
Indiana University	EMMA database	N	Municipal	United States
Iowa Finance Authority	Regulator website	N	Municipal	United States
ING	Issuer website	Y	Commercial Bank	Netherlands
KBN	Issuer website	Y	Municipal	Norway
Kommuninvest	Issuer website	Y	Municipal	Sweden
Latvenergo	Issuer website	N	Corporate	Latvia
LM Group Holding	Issuer website	N	Corporate	Denmark
Massachusetts State Clean Water	EMMA database	N	Municipal	United States
Morgan Stanley	Issuer website	N	Commercial Bank	United States
MIT	No public link available yet	N	Municipal	United States
NAB	Issuer website	N	Commercial Bank	Australia
New Jersey Environmental Infrastructure Trust	Issuer website	N	Municipal	United States
New York MTA	EMMA database	N	Municipal	United States
New York State Environmental Facilities Corporation	No public link available yet	N	Municipal	United States
Nordex	No public link available yet	N	Corporate	Germany
Nord-Pas-de Calais (Hauts-de-France)	No public link available yet	N	Municipal	France
NRG Yield	Issuer website	Y	Corporate	United States
NRW Bank	Issuer website	Y	Government agencies and state-backed entities	Germany
NWB Bank	Issuer website	Y	Government agencies and state-backed entities	Netherlands
Nya SFF (Fabege)	Issuer website	N	Corporate	Sweden
Örebro Municipality	Issuer website	N	Municipal	Sweden
Provence-Alpes-Côte d'Azur	No public link available yet	N	Municipal	France
Province of Ontario	Issuer website	Y	Municipal	Canada
Ramsey County	EMMA database	N	Municipal	United States
Regency Centers	Issuer website	Y	Corporate	United States
Renovate America	Issuer website	Y	ABS	United States
Rentenbank	Issuer website	N	Commercial Bank	Germany
Rhode Island Clean Water Finance Agency	Issuer website	N	Municipal	United States
Rikshem	Issuer website	N	Corporate	Sweden
San Diego Unified School District	Issuer website	N	Municipal	United States
San Francisco Public Utilities	Issuer website	Y	Municipal	United States
SCA	Issuer website	N	Corporate	Sweden
Shanks Group	Issuer website	Y	Corporate	United Kingdom
Skanska	Issuer website	N	Corporate	Sweden
Sociéte Générale CIB	Issuer website	Y	Commercial Bank	France
Southern Power Company	Issuer website	Y	Corporate	United States
SPD Bank	Xinhua database	N	Commercial Bank	China
Spokane	Issuer website	N	Municipal	United States
Stångåstaden	Issuer website	N	Corporate	Sweden
State of Connecticut	Issuer website	N	Municipal	United States
State of Washington	Issuer website	N	Municipal	United States
Stockholm County Council	Issuer website	N	Municipal	Sweden
Stockland Trust Management Ltd	Issuer website	N	Corporate	Australia
SMBC	Issuer website	N	Commercial Bank	Japan
TD Bank	Issuer website	Y	Commercial Bank	Canada
TenneT Holdings	Issuer website	Y	Corporate	Netherlands

Name	Reporting source	Impact reporting	Issuer type	Country
Transport for London (TfL)	Issuer website	N	Corporate	Austria
Toyota	Issuer website	N	ABS	United States
Unibail-Rodamco	Issuer website	Y	Corporate	France
Unilever	Issuer website	N	Corporate	UK
University of Cincinnati	Issuer website	N	Municipal	United States
Uppsalahem	Issuer website	Y	Corporate	Sweden
Utah State	EMMA database	N	Municipal	United States
Vasakronan	Issuer website	N	Corporate	Sweden
Verbund AG	Issuer website	N	Corporate	Austria
Vornado Realty Trust	Issuer website	N	Corporate	United States
Virginia College Building Authority	EMMA database	N	Municipal	United States
Wallenstam	Issuer website	N	Corporate	Sweden
Yes Bank	Issuer website	N	Commercial Bank	India

Appendix 3: No Reporting found

Issuer	Comment
Akuo Energy	Disclosure expected July 2017
Aligera	Not available
Arise	No specific reporting but project info in annual report
Arizona State University	No specific GB reporting, project progress disclosed
CGN New Energy	Issued prior to PBoC guidelines
Chicago Board of Education	Not available
Chicago Met Water	No specific GB reporting but project progress disclosed
City of Asheville	No specific GB reporting but project progress disclosed
City of Venice, Florida	No specific GB reporting but project progress disclosed
East Bay Municipal Utility District	No specific GB reporting but project progress disclosed
Energia Eolica	Not available
Enna Energia	Not available
Gaelectric Holdings	Not available
Hannon Armstrong	Private placement (PP)
Hartford County, CN	No specific GB reporting but project progress disclosed
Indiana Finance Authority	No specific GB reporting but project progress disclosed
Innovatec	Not available
Jefferson County	Not available
Martha's Vineyard Land Bank	Bonds 100% refinancing. No commitment to report
Massachusetts Development Authority	No specific GB reporting but project progress disclosed
Massachusetts State College	No specific GB reporting but project progress disclosed

Issuer	Comment
Mission TEXAS Economics Development Corporation	Not available
Nedbank	Retail bond
Nelja Energia	Not available
Neoen	PP - all information private
NTE	Not available
Paprec	Pureplay, no separate reporting
Renew Financial	ABS, no intention to report, projects disclosed at issuance
Scatec Solar ASA	Not available
Senvion (Rapid H)	Not available
Sveaskog	Pure-play, no separate GB reporting
TerraForm Global	Private placement
THP Partnership (Tandem Health Partners)	No specific GB reporting but project progress disclosed
Town of Vienna, VA	No specific GB reporting but project progress disclosed
University of Texas	Plans to put info on EMMA when all projects are complete
University of Virginia	Not available
Vardar AS	Not available
Vermont Educational & Health Building Financing Agency	No specific GB reporting but project progress disclosed
Vermont State	Delayed - disclosure expected in July 2017
Vestas	Pureplay - no specific GB reporting
Goldwind New Energy HK	Issued prior to PBoC guidelines

Post-issuance reporting in the green bond market

This study aims to follow up on post-issuance reporting by green bond issuers to see how thoroughly they are reporting on green bond allocation and projects.

Summary findings

- We found public reporting for 74% of green bonds issued before 1 April 2016
- Most issuers are reporting annually
- Content and quality of reporting varies but is generally better for larger, frequent issuers
- Reporting is improving but there is little consistency across the market making comparison difficult
- There is an increasing trend towards impact reporting
- Impact reporting is useful to investors but a balance needs to be struck between useful reporting and over burdensome reporting requirements

Prepared by Climate Bonds Initiative.

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Climate Bonds Initiative

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