

Current Status, Issues and Recommendations on Impact Reporting

-A Case Study of Green Bonds for Renewable Energy Sector in Japan

English Summary and Data on Green Bond Issuance in Japan¹

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The green bond market has been growing both domestically and internationally, and the amount of bonds issued in Japan has grown from JPY 33 billion in 2013 to about JPY 1,017 billion in 2020 (Ministry of the Environment 2020a). The green bond market was established to ensure the orderly development of green bonds, including from an environmental aspect, by promoting transparency, information disclosure, and reporting. On the other hand, there is a lack of consistency and inappropriateness in green bond reporting which has been pointed out by managers of green bond funds internationally, and investors have found it difficult to incorporate the impact disclosed by issuers into their own portfolios. In this paper, we discuss how impact is being reported (impact reporting), as this plays an important role for issuers to gain the trust of investors when considering what environmental improvement (impact) is expected or realized by green bonds. Specifically, we have used the renewable energy sector as a case study, as this is one of the most common use of proceeds for green bonds. We analyse the current status of impact reporting for Japan's green bonds, identify challenges, and make recommendations for the future.

¹ This is a translated summary of the original policy report in Japanese “インパクトレポーティングの現状・課題と提言—日本のグリーンボンドの再エネセクターを事例に—” <https://www.iges.or.jp/jp/pub/gbimpactreporting/ja>

The green bonds covered by the analysis are those issued in the two-and-a-half-year period from January 2017 to June 2019 and those which include renewable energy in their use of proceeds. As a result, a total of 45 green bonds issued by 31 issuers with a total issuance amount of JPY 733.7 billion are included in the analysis. In discussing the impact reporting of these green bonds, we refer to the Green Bond Guidelines 2017 (2017 Guidelines) set out by the Ministry of the Environment (MOE) and the Green Bond Principles (GBP) formulated by the International Capital Market Association (ICMA) as the norm for green bond reporting in Japan during the above period. A revised version of the GBP was issued in June 2021, so we have also taken this latest version into consideration when deriving our recommendations. Similarly, the revised Guidelines published by MOE in 2020 (2020 Guidelines) are also considered. The following table shows the current status, issues and recommendations regarding impact reporting of the green bonds identified in our analysis.

Current status, challenges and recommendations for impact reporting of green bonds

	Current status and challenges	Recommendations
1. Disclosure of Reporting	<p><u>MOE guidelines and GBP :</u></p> <p>The 2017 and 2020 Guidelines stipulate that issuers should publicly disclose the reporting; the 2020 Guidelines mention this also applies to private notes. The Green Bond Principles (GBP) do not distinguish between public and private notes. There are no specific provisions on where to disclose, but disclosure should be “readily available”.</p> <p><u>Current status · challenges :</u></p> <p>With some exceptions such as private notes, green bond reporting is generally disclosed. On the other hand, there were cases where the information could not be easily identified.</p>	<p>To the extent possible and necessary, disclosure of green bond reporting by private notes should be promoted internationally.</p> <p>The practice of disclosing reporting of green bonds in a more "readily available" form should be promoted.</p>
2. Reference to impact in reporting	<p><u>The 2017 and 2020 Guidelines and the GBP:</u> Both GBP and the 2017 and 2020 Guidelines ask for disclosure of the detailed information at the project level except for some cases e.g. confidentiality agreements.</p>	<p>To the extent possible, it is desirable that detailed information is disclosed by issuers and then reviewed by external reviewers.</p>

	<p><u>Current status · challenges :</u></p> <p>All green bond issuers that disclose their reporting include impact, except for those that have not yet reported on their impact due to being in the early stage of project etc.</p> <p>However, in 12 cases, detailed information on impact, which is not included in the issuer's reporting, are in the documents of external reviewers.</p>	
3. Period and timing of reporting	<p><u>The 2017 and 2020 Guidelines and the GBP:</u> provide for annual updates until full allocation.</p> <p><u>Current status · challenges :</u></p> <p>Of the 45 green bond issuers, 31 had confirmed post-issuance reporting. Reports are disclosed at the issuer's own timing, such as the fiscal year, generally around one year after issuance.</p>	—
4. Indicators of impact	<p><u>The 2017 and 2020 Guidelines and the GBP:</u> The 2017 and 2020 Guidelines and the GBP provide examples of indicators.</p> <p><u>Current status · challenges :</u></p> <p>Electricity generation and CO2 reductions were often used as indicators. On the other hand, there were some cases where the impact was based on indicators that were not included in the MOE guidelines of the or in the examples given in the GBP.</p>	Wherever possible, it is better that issuers disclose the indicators exemplified by GBP and the 2017 and 2020 Guidelines.
5. Level of impact	<p><u>The 2017 and 2020 Guidelines and the GBP:</u> While it is recommended to disclose information on a project basis, guidelines allow disclosure in generic terms or aggregated at the portfolio level, if there are confidentiality agreements, competitive considerations, and/or a large number of</p>	It may be worthwhile to consider the requirement to report on certain indicators at the bond level (e.g. in the case of renewable energy, at a minimum, the amount of electricity generated should be included in the reporting for each bond).

	<p>underlying projects that limit the disclosure of details.</p> <p><u>Current status · challenges :</u></p> <p>The impact is reported at various levels: project, portfolio, bond and issuer levels. In addition, different indicators are used for each level (e.g. installed capacity in projects and generation in bonds).</p>	
6. Calculation of impact (CO ₂ emission reduction)	<p><u>The 2017 and 2020 Guidelines and the GBP:</u> The 2017 Guidelines provide examples of formulae to calculate emission reductions for each renewable energy technology; ICMA's "Handbook Harmonised Framework for Impact Reporting (the Handbook)" recognises that there is no common global methodology, and encourages full transparency on methodology and assumption.</p> <p><u>Current status · challenges :</u> There is no common framework for GHG accounting, and green bond reporting practices are diverse. It is currently impossible to ensure fair comparability of GHG emission reductions by green bonds.</p>	<p>In the case of impact reporting on power generation by renewable energy plants that have commenced commercial operation, it may be worthwhile to consider specifying indicators for power generation. In addition, in light of the 2021 revision of the GBP, it would be desirable that market practice in Japan promotes not only the expected impact but also the actual impact where possible.</p>
7. Share of contribution of green bond proceeds	<p><u>The 2017 and 2020 Guidelines and the GBP:</u> In the 2017 and 2020 Guidelines, the expected environmental benefits of each green project is included in the content of reporting, but there is no mention regarding the share of contribution from the green bond proceeds. Similarly, the ICMA's GBP do not include information on the share of contribution of impact (there is a reference to this in the Handbook); the draft EU Green Bond Standard includes</p>	<p>It would be more meaningful for the MOE Guidelines to refer to how issuers can report on the share of contribution by green bond proceeds.</p>

	<p>"share of financing" as part of impact reporting.</p> <p><u>Current status · challenges :</u></p> <p>The share of contribution by green bonds in the cost or impact of a project overall was not reported by non-financial sector issuers, but was reported by nine financial sector issuers except for cases of refinancing small-scale solar PV installations, such as installment loans.</p>	
8. Lifecycle Impact	<p><u>The 2017 and 2020 Guidelines and the GBP:</u> The 2017 and 2020 Guidelines, and the 2018 GBP, refer only to specific sectors.</p> <p><u>Current status · challenges :</u> Six green bonds use their proceeds for biomass, and out of these, four assume zero emissions from renewable energy. The remaining two take into account the CO2 emission impact of boiler plant operation, but not from raw material procurement to disposal. For hydropower, the EU Taxonomy requires 100gCO2-eq/kWh on a lifecycle basis, and it is a controversial sector in terms of GHG emission.</p>	<p>It may be desirable to include hydropower as an example of a sector that requires consideration of lifecycle impact, considering the characteristics of the sector and the impact of the EU taxonomy on the Japanese market.</p>
9. Negative Impacts	<p><u>The 2017 and 2020 Guidelines and the GBP:</u> Both the 2017 and 2020 Guidelines state that negative impacts (i.e. negative environmental effects caused by green bonds) should be known to investors, but are not required to be included in ex-post reporting. Nonetheless, the 2020 Guidelines encourage the establishment of a process for risk mitigation measures for negative impacts.</p>	<p>In the case of renewable energy projects with reasonable risk of negative impacts, it may be necessary to promote the inclusion of environmental assessments results, measures taken to avoid, minimize or mitigate negative impacts, as well as a summary of the subsequent situation in impact reporting.</p> <p>In light of the 2021 revision of the GBP, it would also be useful to consider how the</p>

	<u>Current status · challenges</u> : No practices were identified.	Japanese Guidelines treat negative impacts.
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This paper confirms diversified practices and makes recommendations. It is important to promote the standardisation of international impact reporting, thereby ensuring that investors can assess the impacts of green bonds adequately, while keeping in mind the need to reduce the burden on issuers. The issues raised in this paper have implications for the standardisation of impact reporting for green bonds internationally.

In addition, renewable energy, which is used as a case study for this paper, is probably one of the most established sectors in terms of environmental indicators, and the context may be different from other sectors in many ways. However, we believe that the above recommendations especially on "1. Disclosure of reporting", "2. Description of impact in reporting", "5. Level of impact", and "7. Share of contribution of green bond proceeds" have implications for other sectors.

Appendix: 45 green bonds covered by the paper (in order of issuance date)

	Issuer Name	Issuer Sector	Amount (million JPY)	Date of Issuance	Reporting on the issuers' website	Reference to impact in the Issuers' website
1	JAG Energy Co., Ltd. (Private)	Non-financial	54	Jan 2017	Difficult to identify	Difficult to identify
2	Canadian Solar (Private)	Non-financial	54	Mar 2017	Difficult to identify	Difficult to identify
3	Canadian Solar (Private)	Non-financial	87	Jul 2017	Difficult to identify	Difficult to identify
4	Renewable Japan (Private)	Non-financial	47	Aug 2017	Yes	Not yet published (less than 1 year from operation)
5	JAG Energy Co., Ltd. * (Private)	Non-financial	52	Sep 2017	Difficult to identify	Difficult to identify
6	Canadian Solar (Private)	Non-financial	74	Oct 2017	Difficult to identify	Difficult to identify
7	Sumitomo Mitsui FG	Finance	610	Oct 2017	Yes	Yes
8	Mizuho FG	Finance	630	Oct 2017	Yes	Yes
9	Development Bank of Japan	Finance	1069	Oct 2017	Yes	Yes
10	Tokyo Metropolitan Government (5 billion yen, five years)	Municipality	50	Oct 2017	Yes	Yes
11	Tokyo Metropolitan Government (5 billion yen, 30 years)	Municipality	50	Oct 2017	Yes	Yes
12	Tokyo Metropolitan Government (0.117 billion 1.17 AUD)	Municipality	88	Dec 2017	Yes	Yes
13	Toda Corporation	Non-financial	94	Oct 2017	Yes	Not yet published (under construction)
14	MUFJ	Finance	610	Jan 2018	Yes	Yes
15	JAG Energy Co., Ltd. * (Private)	Non-financial	75	Mar 2018	Difficult to identify	Difficult to identify
16	Giga Solar Materials Corp.*	Non-financial	65	Mar 2018	Difficult to identify	Difficult to identify
17	Mitsubishi UFJ Lease & Finance	Finance · Lease	100	April 2018	Yes	Yes
18	Renewable Japan (Private)	Non-financial	69	April 2018	Yes	Yes
19	RICHO LEASING	Finance · Lease	97	Sep 2018	Yes	Yes
20	Sumitomo Mitsui Trust Bank	Finance	610	Sep 2018	Yes	Yes
21	Tokyo Metropolitan Government (5 billion yen, 5 years)	Municipality	50	Oct 2018	Yes	Yes

22	Tokyo Metropolitan Government (5 billion yen, 30years)	Municipality	50	Oct 2018	Yes	Yes
23	Tokyo Century Corporation	Finance・リース	95	Oct 2018	Yes	Yes
24	Daio Paper Corporation	Non-financial	190	Oct 2018	Yes	Yes
25	Daio Paper Corporation	Non-financial	63	Oct 2018	Yes	Yes
26	Marui Group	Non-financial	95	Oct 2018	Publish at the company-wide level	Publish at the company-wide level
27	Obayashi Corporation	Non-financial	95	Oct 2018	Yes	Yes
28	Fuyo Lease Group	Finance・リース	94	Nov 2018	Yes	Yes
29	Daiwa Securities Group	Finance	94	Nov 2018	Yes	Yes
30	Tokyo Metropolitan Government (890 million USD)	Municipality	95	Dec 2018	Yes	Yes
31	MUFJ	Finance	128	Dec 2018	Yes	Yes
32	Sumitomo Mitsui Banking Corporation	Finance	243	Dec 2018	Yes	Yes
33	Sumitomo Mitsui Banking Corporation	Finance	63	Dec 2018	Yes	Yes
34	Toda Corporation	Non-financial	48	Dec 2018	Yes	Not yet published (under construction)
35	Aeon Product Finance	Finance	120	Dec 2018	(Possibly) Yes*****	Difficult to identify
36	Canadian Solar (Private)	Non-financial	62	Jan 2019	Difficult to identify	Difficult to identify
37	JA solar (Private)	Non-financial	51	Feb 2019	Difficult to identify	Difficult to identify
38	Renewable Japan (Private)	Non-financial	89	Feb 2019	Yes	Not yet published (less than 1 year from operation)
39	Konan Ultra Power	Non-financial	1	Feb 2019	Yes	Yes
40	Hitachi Capital	Finance	95	Feb 2019	Yes	Not yet published (not measured yet)
41	TOENEC (Private)	Non-financial	140	Mar 2019	Difficult to identify	Difficult to identify
42	Orient Corporation	Finance	50	Apr 2019	Yes	Yes
43	JACCS	Finance	100	Apr 2019	Yes	Yes
44	Sumitomo Mitsui FG	Finance	610	May 2019	Yes	Yes
45	Renewable Japan (Private)	Non-financial	40	Jun 2019	Yes	Difficult to identify

Sources : made based on 環境省 (2020b) and CBI (2020)

*In the case of issuance by foreign currency, the amount of issuance is based on the exchange rate as of 16 July 2020.

** "Yes" includes cases even when documents by external reviewers are available on the issuer's website.

*** "Private" in the table means that the issue is a private placement.

**** The grey columns in the table are only included in the analysis after "1" and "2" in the "Table: Current status, challenges and recommendations for impact reporting by green bonds".

***** The company plans to make regular disclosures within the trust fund status report, and it is believed that these are disclosed in the report, but this could not be confirmed on the web.

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