

Tohoku Electric Power Co., Inc.

For Green bond eligibility for post-issuance

DNV GL Verification Report



Feb. 2021

DNV GL Business Assurance Japan K.K.

Scope and Objectives

The scope of this report is post-issuance verification for two green bonds (hereinafter "BOND") that have been certified by the Climate Bond Initiative^{*1} issued by Tohoku Electric Power Co., Inc. (hereinafter "Tohoku Electric Power" or "Issuer").

Tohoku Electric Power has issued two BOND, "Tohoku Electric Power Green Bond" (517th Corporate Bond) on February 27, 2020 and "2nd Tohoku Electric Power Green Bond" (524th Corporate Bond) on September 16, 2020. This post-issuance verification of bonds complies with the programmatic certification stipulated in Climate Bonds Standard Version 3.0^{*2}, and covers the above two green bonds.

*1: Climate Bonds Initiative (hereinafter "CBI")

*2: Climate Bonds Standard Version 3.0 (hereinafter "CBS v3.0")

Tohoku Electric Power allocates the proceeds by green bonds to projects and assets categorized into the following categories.

- **Renewable energy**
(including power generation, transmission, equipment and products)

DNV GL Business Assurance Japan K.K. (hereinafter referred to as “DNV GL” or “we”) has been commissioned by Tohoku Electric Power, to provide the Post Issuance verification of the BOND as an independent and CBI-certified verifier under the CBS v3.0.

DNV GL’s criteria and information covered to achieve this is described under ‘Work Undertaken’ below. The Post Issuance Verification was conducted on the provided information including interview by Tohoku Electric Power dated 28th January 2021.

In this paper, no assurance is provided regarding the financial performance of the BOND, the value of any investments in the BOND, or the long-term environmental benefits of the transaction. Our objective has been to provide an assessment as to whether the BOND has met the criteria set out in the CBS v3.0 and the associated Sector Technical Criteria on the basis set out below. Therefore, the scope of DNV GL’s statement of opinion is the scope defined by CBS v3.0. In addition, CBS v3.0 comprehensively includes the Green Bond Principles (ICMA 2018, hereinafter “GBP”) and Green Bond Guidelines (Ministry of the Environment, 2020, hereinafter “GBGLs”), which are widely recognized domestic and international standards. Therefore, this verification report includes the elements of the periodical review (required confirmation items) defined by these.

•Onshore wind power generation:

Wind Sector Eligibility Criteria of the Climate Bonds Standard (Version 1.1)

•Offshore wind power generation:

The Marine Renewable Energy Sector Eligibility Criteria of the Climate Bonds Standard (October 2017)

•Geothermal power generation:

Geothermal Energy and the Climate Bond Standard (Version 1.0)

•Solar power generation:

Climate Bonds Standard & Certification Scheme Sector Criteria for Solar (version 2.1)

Responsibilities of the Management of Issuer (Tohoku Electric Power) and DNV GL

The Tohoku Electric Power has provided the information and data used by DNV GL during the delivery of this review. DNV GL's statement represents an independent opinion and is intended to inform Tohoku Electric Power and other interested stakeholders in the BOND as to whether the established criteria have been met, based on the information provided to us. In our work we have relied on the information and the facts presented to us by Tohoku Electric Power.

DNV GL is not responsible for any aspect of the nominated projects and assets referred to in this opinion and cannot be held liable if estimates, findings, opinions, or conclusions are incorrect. Thus, DNV GL shall not be held liable if any of the information or data provided by Tohoku Electric Power's management and used as a basis for this assessment were not correct or complete.

Basis of DNV GL's opinion

DNV GL has conducted the verification against the CBS v3.0 and associated Sector Technical Criteria through the creation and execution of a verification protocol addressing each requirement of the CBS v3.0 and the associated Sector Technical Criteria. The detail of areas covered in the DNV GL verification is summarised in Schedule 2 below.

Work undertaken

Our work constituted a high-level review of the available information, based on the understanding that this information was provided to us by Tohoku Electric Power in good faith. We have not performed an audit or other tests to check the veracity of the information provided to us. The work undertaken to form our opinion included:

Initial (Pre-Issuance) Verification (CBS v3.0) *executed in July 2020

- Creation and execution of a Climate Bonds Standard Protocol, adapted to include the relevant Sector Technical Criteria for the BOND nominated projects and assets, as described above and in Schedule-2 to this Assessment;
- Assessment of documentary evidence provided by Tohoku Electric Power on the BOND and supplemented by a high-level desktop research, onsite visit for documentation review and interviews with key personnel from Tohoku Electric Power. These checks refer to current assessment best practices and standards methodology;
- Discussions with Tohoku Electric Power management, and review of relevant documentation;
- Documentation of findings against each element of the criteria. Our statement of opinion (more on this later) summarizes these findings.

Post-Issuance Verification (CBS v3.0) *This report

- Assessment of documentary evidence provided by Tohoku Electric Power on the BOND and supplemented by a high-level desktop research, documentation review and interviews with key personnel from Tohoku Electric Power. These checks refer to best practices and standard methodologies.
- Discussions with Tohoku Electric Power management, and review of relevant documentation;
- Review of the nominated projects and assets as described in Schedule-2 as at the time of Periodic Verification;
- Verification of impact reporting claims and associated data where applicable;
- Review and testing where possible of impact reporting data;
- Documentation of findings for Periodic Verification as detailed in this Assessment. Our opinion as detailed below is a summary of these findings.

DNV GL's findings are listed below:

Findings and DNV GL's opinion

DNV GL conducted post-issuance verification of two green bonds issued by Tohoku Electric Power, "Tohoku Electric Power Green Bond" (517th Corporate Bond) and "2nd Tohoku Electric Power Green Bond" (524th Corporate Bond). DNV GL is responsible for providing independent verification results and representations regarding compliance with CBS v3.0.

DNV GL conducted post-issuance verification of the above two green bonds in accordance with ISAE3000 (Assurance engagements other than audits or review of historical financial information). The verification included: i) checking whether the provisions of the CBS were consistently and appropriately applied and ii) the collection of evidence supporting the verification.

DNV GL's verification approach draws on an understanding of the risks associated with conforming to the CBS v3.0 and the controls in place to mitigate these. DNV GL planned and performed the verification by obtaining evidence and other information and explanations that DNV GL considers necessary to give limited assurance that the BOND meet the requirements of the CBS v3.0.

This report also includes elements of a periodical review of GBP2018 and GBGLs2020 related to the above.

The summary of the Findings and DNV GL's opinion are as follows:

- The proceeds for the two green bonds (5 billion JPY and 10 billion JPY, respectively) are being allocated to the eligible project as planned, and at the time of post-issuance verification in January 2021, allocated amount was 5.0 billion JPY (allocated), 6.6 billion JPY has been allocated. Unallocated proceeds (0 billion JPY and 3.4 billion JPY, respectively) is planned to be allocated in timely manner according to the progress of the project.
- Allocated funds are used for both new investments and refinancing. It was confirmed that most of the projects being funded has progressed as scheduled, except for some projects was reviewed its commercial operation due to the influence of the COVID-19.
- The environmental impact of the project will be evaluated qualitatively and quantitatively after the funded project starts commercial operation (annual CO₂ emission reduction and installed capacity for each renewable energy category). These environmental impacts will be disclosed from the Green Bond in the timely manner, which has reached the timing of reporting in the Tohoku Electric Power Group Integrated Report, with funding status mentioned above. It was confirmed that the funding status of the "Tohoku Electric Power Green Bond "(517th corporate bond) was disclosed in the Tohoku Electric Power Group Integrated Report 2020.

Post-issuance verification results and periodic review summary

As a result, based on the limited assurance procedures conducted by DNV GL, nothing has come to our attention that causes us to believe that the two green bonds ("Tohoku Electric Power Green Bond" (517th Corporate Bond) and "2nd Tohoku Electric Power Green Bond" (524th Corporate Bond)) are not, in all material respects, in compliance with the requirements of the CBS v3.0 and the associated sector technical criteria.

In addition, DNV GL has confirmed that the requirements for periodical reviews set out in GBP2018 and GBGLs are being properly implemented.

Considering all of the above verification, DNV GL confirmed that Tohoku Electric Power's green bonds are executed in accordance with related criteria of CBS v3.0, GBP2018, and GBGLs2020 through post-issuance verification and periodic review.

DNV GL Business Assurance Japan K.K.

19th February 2021



Mark Robinson

Manager, Sustainability Services
DNV GL – Business Assurance, Australia



Naoki Maeda

Managing Director
DNV GL – Business Assurance Japan K.K.



Masato Kanedome

Project Leader
DNV GL – Business Assurance Japan K.K.

About DNV GL

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organisations to advance the safety and sustainability of their business. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers' decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide customers and society with operational and technological foresight. With our origins stretching back to 1864, our reach today is global. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping customers make the world safer, smarter and greener.

Schedule-1. List of green project candidates

Following projects in the table (Project outline and Remarks, capacity and commercial operation, etc) has been confirmed its eligibility as of July 2020. The proceeds from "Tohoku Electric Power Green Bond" (517th Corporate Bond) and "2nd Tohoku Electric Power Green Bond" (524th Corporate Bond) are allocated to the Geothermal, Offshore wind, Onshore wind and Solar project (as of January.2021)

No.	Category	Sub category	Funding status	Project outline and Remarks	
1	Renewable energy	Geothermal energy	"Tohoku Electric Power Green Bond" (517th Corporate Bond), 5.0 b-JPY ->5.0 b-JPY was fully allocated (refinance : 3.1b-JPY)	Project candidate : Capacity : approx. 100MW Commercial operation : FY2020 -> FY2021 Criteria : CDM registration project (ref.6834)	
2		Offshore wind energy		Project candidate : Capacity : 155MW~1,000MW/site Commercial operation : FY2023~ Criteria : The environmental impact assessment process is proceeding in accordance with environmental impact assessment system in Japan.	
3		Onshore wind energy		"2nd Tohoku Electric Power Green Bond" (524th Corporate Bond), 10.0b-JPY ->6.6b-JPY (refinance : 3.6b-JPY)	Project candidate : Capacity : 14MW~174MW/site Commercial operation : FY2020 *started commercial operation, and some projects are rescheduling Criteria : The environmental impact assessment process is proceeding in accordance with environmental impact assessment system in Japan.
4		Solar		Project candidate : Capacity : 51.6MW/site Capacity : FY2021~ Criteria : If necessary, the environmental impact assessment process is proceeding in accordance with environmental impact assessment system in Japan.	

* Other sector criteria documents of renewable energy sub categories in the Framework (Hydropower and Biomass energy) are now during public consultation as of January 2021. These projects will be added and verified in the subsequent bond issuance when sector criteria documents are released.

Schedule-2. Green Bond Eligibility Assessment Protocol

GBP-1 to GBP-4 below is DNV GL's green bond eligibility assessment protocol based on the Green Bond Principles (ICMA, 2018). DNV GL recognizes that these eligibility criteria include the key requirements of the Green Bond Guidelines (Ministry of the Environment, 2020).

GBP-1 Use of proceeds

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV GL Findings
1a	Type of bond	The bond must fall in one of the following categories, as defined by the Green Bond Principles: <ul style="list-style-type: none"> Green Use of Proceeds Bond Green Use of Proceeds Revenue Bond Green Project Bond Other 	<ul style="list-style-type: none"> Interviews with stakeholders Document review 	The BOND falls into the category below: <ul style="list-style-type: none"> Green Use of Proceeds Bond
1b	Project Categories	The cornerstone of a Green Bond is the utilization of the proceeds of the bond which should be appropriately described in the legal documentation for the security.	<ul style="list-style-type: none"> Interviews with stakeholders Document review 	It was confirmed through the legal documents related to the BOND that the all the net proceeds are allocated to financing (new investment) or refinancing for projects related to development, construction, operation and renovation of renewable energy.
1c	Environmental benefits	All designated Green Project categories should provide clear environmentally sustainable benefits, which, where feasible, will be quantified or assessed by the issuer.	<ul style="list-style-type: none"> Interviews with stakeholders Document review 	It was confirmed that the green project has environmental benefits as a reduction of CO2 emissions, and that the environmental improvement effect is reported annually from the green bond when the timing of reporting has arrived in the issuer's integrated report.
1d	Refinancing share	In the event that a proportion of the proceeds may be used for refinancing, it is recommended that issuers provide an estimate	<ul style="list-style-type: none"> Interviews with stakeholders 	It was confirmed through interview with the personnel of the Issuer that the approximate

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV GL Findings
		of the share of financing vs. re-financing, and where appropriate, also clarify which investments or project portfolios may be refinanced.	<ul style="list-style-type: none"> • Document review 	amount (or percentage of the portion) of the proceeds for refinancing are disclosed through a periodic reporting.

GBP-2 Process for Project Evaluation and Selection

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV GL Findings
2a	Investment-decision process	<p>The issuer of a Green Bond should outline the decision-making process it follows to determine the eligibility of projects using Green Bond proceeds. This includes, without limitation:</p> <ul style="list-style-type: none"> • A process to determine how the projects fit within the eligible Green Projects categories identified in the Green Bond Principles; • The criteria making the projects eligible for using the Green Bond proceeds; and • The environmental green objectives 	<ul style="list-style-type: none"> • Interviews with stakeholders • Document review 	It was confirmed through document review and interview with the personnel of the Issuer that processes to determine the eligibility of the project that use the proceeds from the BOND have been clearly described in the framework.
2b	Issuer's environmental governance framework	In addition to information disclosed by an issuer on its Green Bond process, criteria and assurances, Green Bond investors may also take into consideration the quality of the issuer's overall framework and performance regarding environmental sustainability.	<ul style="list-style-type: none"> • Interviews with stakeholders • Document review 	It was confirmed that the green project implemented by the issuer is in the process of being released in stages, with due consideration given to the environmental aspects, based on the legal system of each country.

GBP-3 Management of proceeds

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV GL Findings
3a	Tracking procedure-1	The net proceeds of Green Bonds should be credited to a sub-account, moved to a sub- portfolio or otherwise tracked by the issuer in an appropriate manner and attested to by a formal internal process that will be linked to the issuer's lending and investment operations for Green Projects.	<ul style="list-style-type: none"> • Interviews with stakeholders • Document review 	It was confirmed through document review and interview with the personnel of the Issuer that the net proceeds can be tracked by the Issuer's accounting system and ensured by confirmation processes in the Issuer's internal accounting standard/procedures.
3b	Tracking procedure-2	So long as the Green Bonds are outstanding, the balance of the tracked proceeds should be periodically reduced by amounts matching eligible green investments or loan disbursements made during that period.	<ul style="list-style-type: none"> • Interviews with stakeholders • Document review 	It was confirmed that the issuer plans to review the balance of green bonds on a regular basis (at least annually) during the period from bond issuance to redemption of green bonds.
3c	Temporary holdings	Pending such investments or disbursements to eligible Green Projects, the issuer should make known to investors the intended types of temporary investment instruments for the balance of unallocated proceeds.	<ul style="list-style-type: none"> • Interviews with stakeholders • Document review 	It was confirmed that the balance of the unallocated amount is recognized sequentially through the Issuer's accounting system and confirmation processes based on internal accounting standards/procedures. In addition, it was confirmed that the balance of unallocated proceeds is disclosed through periodical reporting on the allocation of proceeds.

GBP-4 Reporting

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV GL Findings
4a	Periodical reporting	<p>In addition to reporting on the use of proceeds and the temporary investment of unallocated proceeds, issuers should provide at least annually a list of projects to which Green Bond proceeds have been allocated including</p> <ul style="list-style-type: none">- when possible with regards to confidentiality and/or competitive considerations- a brief description of the projects and the amounts disbursed, as well as the expected environmentally sustainable impact.	<ul style="list-style-type: none">• Interviews with stakeholders• Document review	<p>It was confirmed that the issuer report on the BOND annually and disclose the status of the project as needed until the proceeds are allocated. It was confirmed that the allocation status of the "Tohoku Electric Power Green Bond" (517th corporate bond) was disclosed in the Tohoku Electric Power Group Integrated Report 2020. Since the projects targeted for allocation contain confidential information, only the number of targeted projects is disclosed.</p>

Schedule 3 CBS v3.0 requirement/criteria

Summary criteria for assertions of compliance with the CBS v3.0

The criteria for reviewing related projects and assets are categorized based on the CBS v3.0 and associated Sector Technical Criteria prior to the bond eligibility projects and asset incorporation. The requirements of CBS v3.0 and technical criteria are classified into Part A to Part C in the table below.

Part A: Pre-Issuance Requirements

Scope	Requirements
1. Use of Proceeds	Net proceeds of the bond must be allocated to nominated projects and assets.
2. Process for Evaluation and Selection of Projects & Assets	A decision-making process shall be maintained to determine the continuing eligibility of the nominated projects and assets.
3. Management of Proceeds	The net proceeds of the bond shall be credited to a sub-account, moved to a sub-portfolio or otherwise identified in an appropriate manner, and documented.
4. Reporting Prior to Issuance	There are specific requirements in respect of reporting on use of proceeds and list of nominated projects and assets, finance/refinance plan, management process of unallocated proceeds, selected criteria, information related to Update report (annual report), and Framework which shall be disclosed.

Part B: Post-Issuance Requirements

Scope	Requirements
5. Use of Proceeds	Net proceeds of the bond must be allocated to nominated projects and assets. Nominated Projects & Assets shall not be nominated to other Certified Climate Bonds and Loans. The Net Proceeds of the Bond shall be no greater than the Issuer's total investment exposure or debt obligation to the Nominated Projects & Assets.

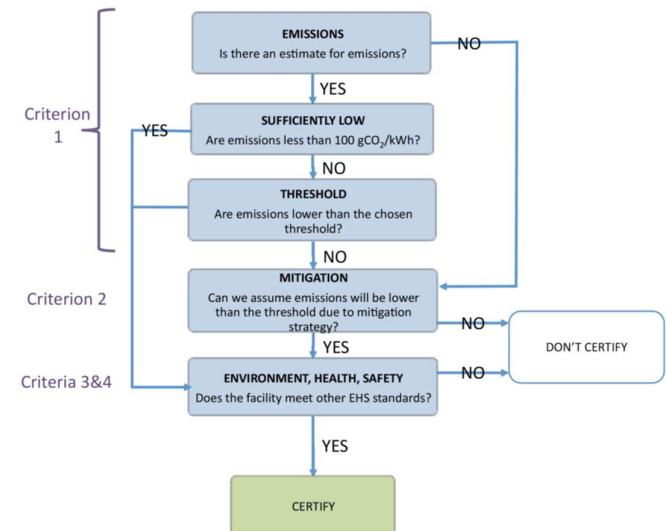
6. Process for Evaluation and Selection of Projects & Assets	A decision-making process shall be maintained to determine the continuing eligibility of the nominated projects and assets.
7. Management of Proceeds	The net proceeds of the bond shall be credited to a sub-account, moved to a sub-portfolio or otherwise identified in an appropriate manner, and documented.
8. Reporting	The Issuer shall prepare an Update Report at least annually while the Bond remains outstanding. The Update report shall include amounts allocated, impact reporting of environmental aspects, information of the projects and assets. These information shall be provided to the verifier and to the CBS board to support the assessment of conformance with the CBS.

Part C: Eligibility of Projects & Assets

Scope	Requirements / Criteria
9. Climate Bonds Taxonomy	Nominated projects and assets shall fall into one or more of the investment areas listed as included in the Climate Bonds Taxonomy
10. Sector Eligibility Criteria	Nominated Projects & Assets shall meet the specific eligibility requirements provided in the relevant Sector Eligibility Criteria documents. Followings are outline of the sector criteria against the verification
	(1) Onshore wind power <u>Criteria : Projects and Assets meet the criteria below</u> • Onshore wind Assets that operate or are under construction to operate
	(2) Offshore wind power <u>Criteria : Projects and Assets meet the criteria below</u> • Onshore wind Assets that operate or are under construction to operate • Disclosure Component. • Mitigation Component • Adaptation and Resilience performance

(3) Geothermal Energy
Criteria : Projects and Assets meet the decision tree structure of the criteria in Figure 1.

Figure 1: Decision tree structure of the criteria



(4) Solar Energy
Criterion 1 : Eligible Project & Assets relating to solar energy generation shall be projects or assets that operate or are under construction to operate in one or more of the following activities:
Criterion 2 : Non-solar fuel use (Eligible Project & Assets that have activities in solar electricity generation facilities or solar thermal facilities shall have a minimum of 85% of electricity generated from solar energy resources)