

Electric Power Development Co., Ltd. (J-POWER)

Green bond eligibility for post-issuance

DNV Verification Report



Aug. 2021

DNV Business Assurance Japan K.K.

Revision history

Issue Date (dd/mm/yyyy)	remarks
24/11/2020	Green Bond eligibility for pre-issuance verification report
17/8/2021 (This report)	Green Bond eligibility for post-issuance verification report

Scope and Objectives

The scope of this report is post-issuance verification for green bond “that is 1st J-POWER Green Bond” (72nd Corporate Bond of Electric Power Development Co., Ltd.), which Electric Power Development Co., Ltd. (hereinafter, “J-POWER” or “Issuer”) has issued on January 21, 2021 and has acquired the certification of Climate Bond Initiative*¹.

This post-issuance verification of bonds complies with the certification process stipulated in Climate Bonds Standard Version 3.0*², and covers the above green bonds.

*1: Climate Bonds Initiative (hereinafter “CBI”)

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

J-POWER allocates the proceeds from the green bond to the projects and assets categorized into the following categories.

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

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

DNV holds no other engagements with the Issuer, including its direct shareholders, for which we foresee conflict of interest to carry out the Scope of Work as defined in the agreement agreed with the Issuer.

DNV’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 J-POWER dated 13th July 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’s statement of opinion is the scope defined by CBS v3.0.

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

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.

Responsibilities of the Management of Issuer (J-POWER) and DNV

J-POWER has provided the information and data used by DNV during the delivery of this review. DNV's statement represents an independent opinion and is intended to inform J-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 verification results and statements of opinion, we have relied on the information and the facts presented to us by J-POWER.

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

DNV holds no other engagements with the Issuer, including its direct shareholders, for which we foresee conflict of interest to carry out the Scope of Work as defined in the agreement agreed with the Issuer.

Basis of DNV's opinion

To provide as much flexibility as possible for the issuer, DNV has applied our green bond assessment methodologies, which incorporates the requirements of the GBP, GBGLs and CBS, to create the Issuer-specific Green Bond Eligibility Assessment Protocol (hereinafter "DNV's Protocol").

The DNV's Protocol has the capacity for potential application of green bonds under the GBP, GBGLs and CBS. Schedule-2 of this report outlines the DNV's Protocol and Findings.

DNV's Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion. The overarching principle and guidelines behind the criteria are that a green bond should "enable capital-raising and investment for new and existing projects with environmental and social benefits".

As per DNV's Protocol, the criteria against which the BOND has been reviewed are grouped under the four Principles:

- **Principle 1 : Use of Proceeds :** The Use of Proceeds criteria are guided by the requirement that an issuer of a green bond must use the proceeds by green bonds for eligible projects. The eligible projects should produce clear environmental benefits.
- **Principle 2 : Process for Project Evaluation and Selection. :** The Project Evaluation and Selection criteria are guided by the requirements that an issuer of a green bond should outline the process it follows when determining eligibility of an investment using green bond proceeds, and outline any impact objectives it will consider.
- **Principle Three: Management of Proceeds. :** The Management of Proceeds criteria are guided by the requirements that a green bond should be tracked within the issuing organization, that separate portfolios should be created when necessary and that a declaration of how unallocated funds will be handled should be made.
- **Principle Four: Reporting.:** The Reporting criteria are guided by the recommendation that at least Sustainability Reporting to the bond investors should be made of the use of bond proceeds and that quantitative and/or qualitative performance indicators should be used, where feasible.

Work Undertaken

Our work constituted a high level of review of the available information, based on the understanding that this information was provided to us by the Issuer 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:

i. Pre-Issuance verification (*implemented in November 2020 and is not included in this report.)

- Creation of the Issuer-specific DNV's Protocol;
- Assessment of evidential documents provided by the Issuer before issuance of the BOND, and supplemental assessment with desk review from a higher perspective;
- Interview with key personnel of the Issuer, and review of the relevant documentation; and
- Reporting of findings against each element of the eligibility criteria

ii. Post-Issuance verification (*this report)

- Assessment of evidential documents provided by the Issuer after issuance of the BOND, and supplemental assessment by desk review from a higher perspective;
- Interview with key personnel of the Issuer, and review of the relevant documentation;
- Review of the candidate projects and assets at the time of the post-issuance verification, including updating the list of them in Schedule-1; and
- Reporting of findings against each element of the eligibility criteria at the post-issuance verification

Our verification results and opinions are summarized in " Findings and DNV's opinion" below.

Findings and DNV's opinion

DNV conducted post-issuance verification of this green bond 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
- ii) the collection of evidence supporting the verification.

DNV'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 planned and performed the verification by obtaining evidence and other information and explanations that DNV considers necessary to give limited assurance that the BOND meet the requirements of the CBS v3.0.

In addition, since the conformity to GBP and GBGLs of the BOND can be related to the conformity to CBS v3.0, the verification results are summarized in one form (from principle 1 to principle 4) as described below.

The Findings and DNV's opinion are as follows:

Principle 1 : Use of Proceeds

DNV has confirmed that the proceeds from this green bond have been allocated to the projects related to the development, construction and operation of onshore wind power that have been verified before the bond is issued. We confirmed that all the proceeds were allocated to refinancing to construction of the project.

Table-1 Allocation status of the proceeds(as of end of March 2021)

Item	Amount (JPY billion yen)
Net proceeds	20.0(19.9)
Allocated amount	
Setana Osato wind farm	9.9
Nikaho No.2 wind farm	8.0
Kuzumaki No.2 wind farm	2.0
Unallocated amount ¥	0.0
All of the proceeds have been allocated for refinancing to the construction funds to the Setana Osato wind farm, Nikaho No.2 wind farm and Kuzumaki No.2 wind farm, which are onshore wind power projects.	

The current status of green projects (wind power generation) is listed in Schedule-1 “List of Green Project” of this report.

It was confirmed that the above three wind power projects which proceeds from this green bond were allocated, have been verified before bond issuance to meet the following CBS technical standards (sector eligibility criteria).

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

Criteria 1 : Onshore wind assets that are in operation or are under construction to operate

(Power generation equipment, power transmission and distribution equipment dedicated to wind power generation, incidental equipment, production / manufacturing or transportation equipment of major equipment)

Criteria 2 : Not offshore wind power

Principle 2 : Process for Project Evaluation and selection

DNV has verified that the process for evaluating and selection for eligible green projects was established and implemented by the issuer before bond issuance. In addition, through this verification activity, no new projects were added and no events that affected the project evaluation and selection process were found after the pre-issuance verification.

Specifically:

- DNV confirmed that the “Renewable Energy Business Strategy Department” and “Financial Department” with specialized knowledge were involved in the evaluation and selection process.
- DNV confirmed that there were no changes to the issuer's climate-related objectives related to the bond issuance and in the rationale for bond issuance.

Principle 3 : Management of Proceeds

DNV has reviewed how the issuer tracked and managed the allocation of the proceeds since the issuance of green bonds.

The details are as follows:

- Management of the net proceeds from the green bonds was performed by finance department using a balance management system and ERP system, in accordance with accounting management procedures. Of the funds raised, all of the net proceeds have been promptly allocated to eligible projects, and there are no unallocated proceeds.
- At the time of allocation, it was confirmed that the finance department confirmed the eligibility of the project based on the internal process of green bond issuance management, and also confirmed that the actual expenditure was tracked and managed by the balance management system.
- Since each project is numbered based on the project name and task name, the allocation status can be constantly tracked and managed for each project.
- It was confirmed that these were managed in a list using the format specified in the internal procedures above.
- It was confirmed that the documents (records) related to fund management were preserved in accordance with the issuer’s document control procedures. It was also confirmed that these documents will be retained for the duration of the redemption period.

As a result, DNV confirmed that the Issuer’s methodology to manage the total amount of proceeds is appropriate and it is aligned with the CBS and the related requirements.

Principle 4 : Reporting

DNV confirmed that information on the allocation status and environmental impact required for green bond reporting has been disclosed on the website. The scope of reporting includes the balance of the unallocated amount, the allocated amount, and the amount that have been used for refinancing. Please refer to the “Table-1 Allocation status of the proceeds(as of end of March 2021)” in Principle 1 for the allocation status.

In addition, DNV confirmed that the issuer disclosed the following indicators based on the power generation performance (Sales of Electricity) of the environmental impact of the operation of the project.

- Installed capacity by renewable energy type (MW) *Disclosed for each project
- Annual CO₂ emission reduction by renewable energy type(t-CO₂)

Table-2 Environmental impact by the project to be allocated (2020 results)

Type	Project	Installed capacity	Environmental impact ^{*2} (CO ₂ emission reduction)
Wind power	Setana Osato wind farm	50MW	166,000t-CO ₂ / year (FY 2020 performance)
	Nikaho N0.2 wind farm	41MW	
	Kuaumaki No.2 wind farm ^{*1}	45MW	

*1: Kuzumaki No. 2 Wind farm started commercial operation in December 2020, so the Environmental impacts are estimated from 4 months performance.

*2: Calculation method of environmental impact: Sales amount of Electricity × CO₂ emission factor (No.2103002 Japan Electric Power Exchange)

Post-issuance verification results and periodic review summary

As a result, based on the limited assurance procedures conducted by DNV, nothing has come to our attention that causes us to believe that the green bonds are not, in all material respects, in compliance with the requirements of the CBS v3.0 and the associated sector technical criteria.

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.

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

From the above, DNV confirmed through post-issuance verification and review that J-POWER green bonds are implemented in accordance with CBSv3.0, GBP2018 and GBGLs2020.

DNV Business Assurance Japan K.K.

17th Aug. 2021



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About DNV

Driven by our purpose of safeguarding life, property and the environment, DNV 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 ENPOWER 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 projects

Both Green projects already in operation and Green Project Candidates listed in the table are a list of Green Project Candidates that have been verified at the time of pre-issuance verification (as of November 2020). In future green bond issuance based on CBI certification, if additional projects are included in addition to the projects already verified in the table, the issuer will confirm that the project meets the eligibility criteria listed on CBS and the table, and DNV will timely verify if necessary.

No.	Category	Sub Category	Nominated Project	Eligible Criteria	Funded Amount* ¹	Remarks
WE-01	Renewable energy	Onshore wind power	Setana Osato Windfarm (allocated project)	Onshore Wind Sector Eligibility Criteria of the Climate Bonds Standard (Version 1.1)	9.9 billion JPY* ¹	Location: Hokkaido Capacity: 50.0MW Commercial Ope: Jan. 2020
WE-02			Nikaho No.2 Windfarm (allocated project)		8.0 billion JPY* ¹	Location: Akita Pref. Capacity: 41.4MW Commercial Ope: Jan. 2020
WE-03			Kuzumaki No.2 Windfarm (allocated project)		2.0 billion JPY* ¹	Location: Iwate Pref. Capacity: 44.6MW Commercial Ope: Dec. 2020
WE-04			Kaminokuni No.2 Windfarm		0 billion JPY (not candidate for allocation)	Location: Hokkaido Capacity: 41.5MW Commercial Ope: 2022
WE-05			Minamiehime No.2 Windfarm (tentative name)			Location: Ehime Pref. Capacity: 40.8MW Commercial Ope: 2023
WE-06			New Tomamae Winvilla Windfarm (tentative name)			Location: Hokkaido Capacity: 30.6MW Commercial Ope: 2022 (replacement)
WE-07			New Shimamaki Windfarm			Location: Hokkaido Capacity: 4.3MW Commercial Ope: 2022 (replacement)

※¹ The green bond (1st J-POWER green bond), which is the subject of post-issuance verification, the net proceeds of 19.9 billion yen after deducting expenses was allocated to WE-01 to WE-03 of the total proceeds of 20 million yen.

Schedule-1 Reference: Representative project example and wind power generation business map of J-POWER

(Example of candidate projects subject to green bond allocation *It does not confirm the allocation)

https://www.jpowers.co.jp/bs/renewable_energy/wind/map.html

https://www.jpowers.co.jp/bs/renewable_energy/wind/data.html



WE-01 Setana Osato Wind Farm (Hokkaido 50.0MW 3.2MW×16 plants)



WE-02 Nikaho No.2 Wind Farm (Akita Prefecture 41.4MW 2.3MW×18 plants)

(くずまき第二風力発電所)



WE-03 Kuzumaki No.2 Wind Farm (Iwate Prefecture 44.6MW 2.0MW×16 plants & 2.1MW× 6 plants)

*Nagasaki Shikamachi wind farm : J-POWER share 70%





Schedule-2. Green Bond Eligibility Assessment Protocol

Following table of GBP-1 to GBP-4 are DNV green bond eligibility protocol set by DNV based on the requirements of CBS, GBP and GBGLs. "Work Undertaken" in the verification activities includes issuer's internal documents, and was provided as evidence of eligibility assessment to DNV through the verification.

GBP-1 Use of proceeds

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV 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 	DNV confirmed that it was properly described in the legal documents related to the BOND document (Amendment to Shelf Registration Statement) that the all the proceeds are allocated to financing (new investment) and refinancing for projects related to development, construction, operation, refurbishment and its related expenses for 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 contributed to reduce CO ₂ emissions, and the environmental impacts are quantitatively evaluated as the amount of CO ₂ emission reduction and reported annually.
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 of the share of financing vs. re-financing, and where appropriate,	<ul style="list-style-type: none"> • Interviews with stakeholders • Document review • J-POWER website 	The issuer has allocated all proceeds to refinancing. The allocated amount for refinancing was reported through the J-POWER website.

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV Findings
		also clarify which investments or project portfolios may be refinanced.		

GBP-2 Process for Project Evaluation and Selection

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV Findings
2a	Investment-decision process	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: <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 	DNV confirmed that the issuer has an internal process to determine the eligibility of the project that use the proceeds from the BOND and that the outline is 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 	DNV confirmed that the green project implemented by the issuer is in line with the issuer's management philosophy, medium- to long-term management plan, and environmental policy, and when it is implemented, compliance with environment-related laws, ordinances and regulations, consideration for the surrounding environment, etc. will be considered. DNV also confirmed through the framework and verification that the green projects bring a clear environmental impact such as CO ₂ reduction.

GBP-3 Management of proceeds

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV 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 that the net proceeds can be tracked by the issuer’s accounting rules and internal accounting system that can track at all times. In addition, DNV confirmed the system practically used and related documents through verification and confirmed that the management status of the raised funds was proved based on this.
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 	The net proceeds from the green bond were fully allocated to eligible projects by March 2021. DNV confirmed that there was no balance of unallocated amount.
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 • J-POWER website 	<p>The all of the net proceeds have been promptly allocated to eligible projects, and there was no unallocated amount.</p> <p>Since the net proceeds was allocated to refinancing, it was confirmed through verification that there was no unallocated balance as of the end of March 2021.</p>

GBP-4 Reporting

Ref.	Criteria	Requirements/Contents	Work Undertaken	DNV 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>DNV confirmed the project to which the proceeds from green bond were allocated on the J-POWER website and related documents.</p> <p>※For details, as shown in Table-1 and Table-2 of the text, a list of projects to be allocated is provided, and the status of allocation and environmental impacts are reported. As of March 2021, there are no unallocated amount.</p>



Schedule 3 CBS v3.0 requirement/criteria

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

Prior to incorporating eligible projects and assets into green bonds, the criteria for reviewing related projects and assets are categorized based on CBSv3.0 and related technical standards. The main requirements of CBSv3.0 and technical standards are broadly classified into Part A to Part C in the table below.

As a result, based on the limited assurance procedures conducted by DNV, nothing has come to our attention that causes us to believe that the green bond is not, in all material respects, in compliance with the requirements of the CBS and the related requirements and the associated sector technical criteria.

Part A: Pre-Issuance Requirements *this section is not included in this report

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 *This report(post-issuance verification)

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
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
	Onshore wind power (wind energy) <u>Criterion 1 : Wind power assets in operation or under construction</u> (Power generation equipment, power transmission and distribution facilities / incidental facilities dedicated to wind power generation, incidental equipment, production / manufacturing or transportation equipment of major equipment) <u>Criterion 2 : Not offshore wind power</u>