

Meidensha Green Bonds

For Green bond eligibility Post-issuance

DNV GL Verification Report



Jan. 2020

DNV GL Business Assurance Japan K.K.

Scope and Objectives

The scope of this Post Issuance Verification Report includes the Meidensha Corporation (hereinafter, "Meidensha" or "Issuer") Green bond Issuance currently outstanding.

Meidensha on 23rd July 2019, issued 6.0 billion-JPY Green Bond ("BOND") and has secured certification of the BOND from the Climate Bonds Initiative against the Climate Bonds Standard.

Meidensha has used the proceeds of the BOND to finance the nominated projects and assets falling under the following categories ;

- **Clean Transportation (3 manufacturing facilities for EV motors & invertors)**
- **Renewable Energy (Solar PV power)**

DNV GL Business Assurance Japan K.K. (henceforth referred to as "DNV GL", "us", "our" and "we") has been commissioned by Meidensha, to provide the Post Issuance verification of the BOND as an independent and approved verifier under the CBS v2.1^{*1}.

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 Meidensha dated 12th November 2019.

*1: Climate Bonds Standard | version 2.1 (Climate Bonds Initiative)

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 v2.1 and the associated Sector Technical Criteria on the basis set out below,

• **Low Carbon Land Transport and the Climate Bonds Standard (Version 1.0)**

Also, solar PV facility installed to Project 02 Kofu Meidensha Electric Mfg. Co., Ltd. has been assessed its eligibility as secondary environmental benefit referring following Sector Technical Criteria

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

The scope of this DNV GL opinion is limited to the CBS v2.1. during its verification, at the time of review, Technical Criteria for - 'Low Carbon Land Transport and the Climate Bonds Standard (version 1.0)' (e.g. passenger, light-duty vehicles, component, EV and hybrid) , and Climate Bonds Standard & Certification Scheme Sector Criteria for Solar (version 2.1) are available for Issuer use.

Responsibilities of the Directors of Issuer(Meidensha) and DNV GL

The management of Meidensha 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 Meidensha management 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 Meidensha.

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 Meidensha'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 v2.1 and associated Sector Technical Criteria through the creation and execution of a verification protocol addressing each requirement of the CBS v2.1 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 Meidensha 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 (completed previously)

- 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 Meidensha on the BOND and supplemented by a high-level desktop research, onsite visit for documentation review and interviews with key personnel from Meidensha. These checks refer to current assessment best practices and standards methodology;
- Discussions with Meidensha management, and review of relevant documentation;
- Documentation of findings against each element of the criteria.

Post-Issuance Verification

- Assessment of documentary evidence provided by Meidensha on the BOND and supplemented by a high-level desktop research, documentation review and interviews with key personnel from Meidensha.
- Discussions with Meidensha 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 has performed a Post Issuance Verification of the BOND. It is DNV GL's responsibility to provide an independent verification statement on the compliance of the BOND with the CBS v2.1.

DNV GL conducted the Post Issuance verification in accordance with the CBS v2.1 and with International Standard on Assurance Engagements 3000 Assurance Engagements other than Audits or Reviews of Historical Information. The verification included i) checking whether the provisions of the CBS v2.1 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 v2.1 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 v2.1.

The main information from the post issuance verification is as follows ;

- Green bond proceeds have been allocated to the eligible projects described in schedule-1. Total amount of funding as of Sep. 2019 is 3.8 billion-JPY compared the total amount of the proceeds (6.0 billion-JPY). Balance of the proceeds (unallocated amount), 2.2 billion-JPY will be funded to the eligible projects as projects progress based on the schedule.
- Green bond proceeds have been partially allocated as refinance. Refinance share slightly changed from pre-issuance stage due to progress of project and its payment date (refer to schedule-1, updated).
- Projects progress follows the schedule. Nagoya works and Kofu Meidensha has started from Nov. 2019, and Numazu works has started from Apr. 2019.

Post Issuance Verification Summary

Based on the limited assurance procedures conducted, nothing has come to our attention that causes us to believe that the BOND is not, in all material respects, in compliance with the requirements of the CBS v2.1 and associated Sector Technical Criteria.

Considering all of the above verification, DNV GL has confirmed that the nominated green projects of Meidensha has been executed in accordance with related criteria of Climate Bonds Standard v2.1 through the post issuance verification.

DNV GL Business Assurance Japan K.K.

15th Jan. 2020



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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.

1. Schedule-1 Nominated Green bond project & assets outline (Details are in following Appendix)

Schedule data as of 12 November 2019 when post-issuance verification, Data confirmed by DNV GL to relate to the Meidensha is executing green bond projects, as scheduled.

Table-1 Meidensha Green Bonds Project

Project No.	Nominated Project/Asset	Green Project Category	Green Project Sub-Category	Remarks (on going) Location, size, schedule, etc.
01	Nagoya Works: Renovation of existing buildings and introduction of new facilities (solely to enable the installation of new equipment and/or upgrade existing equipment) (refinance share : 14% ^{*2})	Clean Transportation	EV, PHEV and HV component for light-duty vehicle(automobile)	Location: Kiyosu City, Aichi Prefecture Operation from : Nov. 2019 Capacity : 4,620m ² , 170,000 units/year(max.)
02	Kofu Meidensha Electric Mfg. Co., Ltd.: Construction of new building and introduction of new facilities ^{*1} (refinance share : 5% ^{*2})	Clean Transportation	EV, PHEV and HV component for light-duty vehicle(automobile)	Location: Chuo City, Yamanashi Prefecture Operation from : Nov. 2019 Capacity : 2,660m ² , 170,000 units /year(max.)
03	Numazu Works: Expansion of facilities (refinance share : 100%)	Clean Transportation	EV, PHEV and HV component for light-duty vehicle(automobile)	Location: Numazu City, Shizuoka Prefecture Operation from : Apr. 2019 Capacity : 240m ² , 120,000 units /year(max.)
Total Exposure : approx. 7 billion JPY Bond amount : 6 billion JPY (Bond maturity : 5 years) Funded amount : 3.8 billion JPY (as of Sep. 2019)				

*1 : Including roof-top type solar PV (approx. 300kW) which meets CBS sector criteria as secondary environmental benefit

This verification report will be updated and/or published if important change is encountered according to the requirement of relevant criteria, by agreement both Meidensha and DNV GL

*2 : updating the latest information

Schedule-1 Appendix-1/3

DNV GL has confirmed that the proceeds from the BOND issued by Meidensha has been allocated to the one project portfolio (including 3 projects) which meets the green bond criteria below. Meidensha has allocated the proceeds 3.8 billion JPY as finance and refinance, as of Sep. 2019.

Eligible green projects portfolio:

Mass-production facilities* for electric vehicle (EV) parts

01 Nagoya Works

02 Kofu Meidensha Electric Mfg. Co., Ltd.

03 Numazu Works

**a new production hub for such parts, upgrading and mass-production lines construction, a new building for producing EV parts, and beef up of existing production lines for parts*

Table-1, Figure-1, -2, Photo-1 and Schedule-1 show the list of green projects 01-03 as described above.

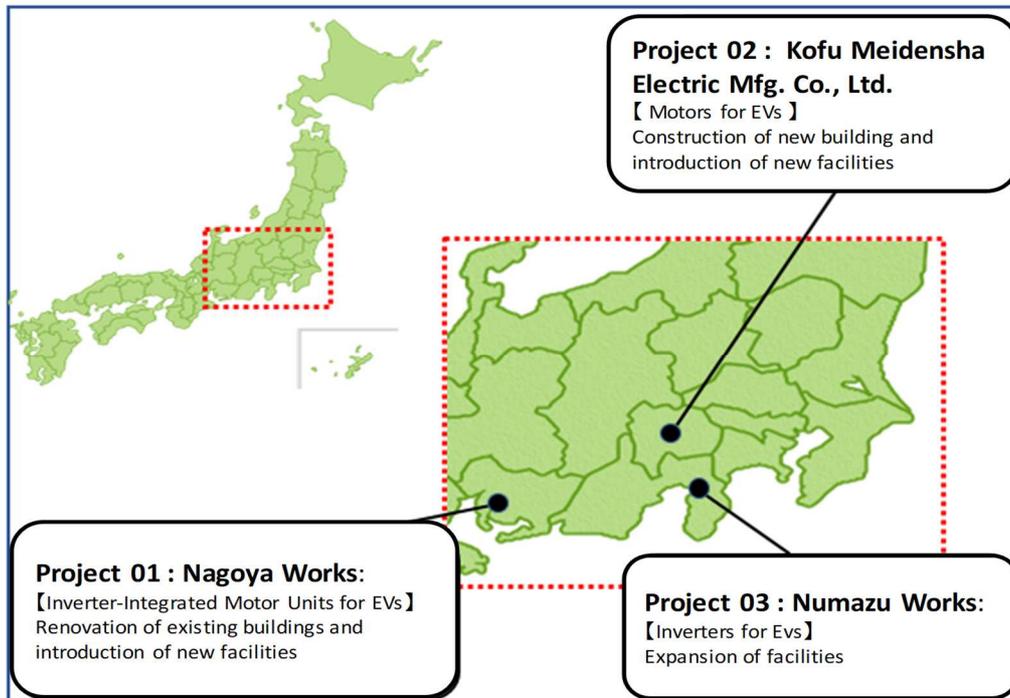


Figure-1 Project locations and products

Schedule-1 Appendix -2/3

Table-1 Outline of Meidensha Green Bonds Project

Project 01 : Nagoya Works: Renovation of existing buildings and introduction of new facilities (solely to enable the installation of new equipment and/or upgrade existing equipment)	
Location	496 Ittangosewari, Nishibiwajimacho, Kiyosu City, Aichi Prefecture
Parts to be produced	Inverter-Integrated Motor Units for EVs
Start of operations	November 2019
Total floor space	4,620 m ²
Production capacity	Maximum annual production of 170,000 units

Project 02 : Kofu Meidensha Electric Mfg. Co., Ltd.: Construction of new building and introduction of new facilities	
Location	825 Nakadate, Chuo City, Yamanashi Prefecture
Parts to be produced	Motors for EVs
Start of operations	November 2019
Total floor space	2,660 m ²
Production capacity	Maximum annual production of 170,000 units
Remark	Equiped with roof-top solar PV (approx. 300kW)

Project 03 : Numazu Works: Expansion of facilities	
Location	515 Kaminakamizo, Higashimakado, Numazu City, Shizuoka Prefecture
Parts to be produced	Inverters for EVs
Start of operations	April 2019
Total floor space	240 m ²
Production capacity	Maximum annual production of 120,000 units

http://www.meidensha.com/news/news_03/news_03_01/1228557_3190.html



Nagoya



Kofu Meidensha
Electric Mfg. Co.,



Numazu

Figure-2 Project location (Meidensha website)

Schedule-1 Appendix-3/3



<Example : Integrated Motor/Inverter for EVs>



Example Motor



Example Inverter

Photo-1 Products Example EV, PHEV

<Product Features>

Meidensha supplies the motor and the inverter that are used in the electric vehicle. Meidensha's products achieved reducing size and weight, high efficiency, low noise.

Meidensha's experience and technology are useful for the high reliability withstanding vehicle mounting. Meidensha is developing the drive system for the next generation vehicle, for example drives using SiC module.

- Reducing size and weight
- High efficiency
- Low noise
- High reliability for withstanding the severe condition at vehicle mounting

Schedule-2 CBS v2.1 Verification criteria

Summary criteria for assertions of compliance with the CBS v2.1

The criteria against which the relevant projects and assets have been reviewed prior to their inclusion in the BOND are grouped under the requirements as detailed within the CBS v2.1 and associated Sector Technical Criteria. These requirements broadly include:

Part A: General Requirements

Area	Requirement
Nominated Projects & Assets	A decision-making process shall be maintained to determine the continuing eligibility of the nominated projects and assets.
Use of Proceeds	Net proceeds of the bond must be allocated to nominated projects and assets.
Non-Contamination 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.
Confidentiality	Information about the nominated projects and assets shall be provided to the Verifier and to the Climate Bonds Standard Board to support the assessment of conformance with the Climate Bonds Standard. The information disclosed to the Verifier and the Climate Bonds Standard Board may be subject to confidentiality arrangements.
Reporting	There are specific requirements in respect of reporting on use of proceeds and nominated projects and assets.

Part B: Low Carbon Contribution - Eligible projects and physical assets

Nominated projects and assets include financing of, or investments in, projects and assets which enable the mitigation of greenhouse gases, as detailed in Schedule 1.

Area	Requirement
<p>Low Carbon Transport</p> <p>Relevant criteria ;</p> <p>Criterion 1 & Criterion 2</p>	<p><u>Criterion 1: Emissions thresholds for private light-duty and heavy goods vehicles</u></p> <p>Emissions thresholds for private light-duty and heavy goods vehicles Assets related to the manufacture of light-duty and heavy goods vehicles qualify for certification if they belong to a technology category where the per passenger-km or per ton-km Scope 1 emissions of the vehicles are universally estimated to be lower than the appropriate threshold.</p> <ul style="list-style-type: none"> - Automatically eligible Light Duty and Heavy Goods Vehicles: electric and fuel cell vehicles - Potentially eligible (depending on threshold) Light Duty Vehicles: hybrid vehicles <p><u>Criterion 2: Components for private vehicles</u></p> <p>Components for private vehicles Assets related to the manufacture of components for private vehicles if it can be demonstrated they are exclusively destined for the manufacture of vehicles that would qualify under Criterion 1.</p>
<p>Solar</p> <p>Relevant criteria ;</p> <p>Criterion 1 & Criterion 2</p>	<p><u>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:</u></p> <ul style="list-style-type: none"> - Onshore solar electricity generation facilities - Wholly dedicated transmission infrastructure and other supporting infrastructure for onshore solar electricity generation facilities including inverters, transformers, energy storage systems and control systems. - Onshore solar thermal facilities such as solar hot water systems. <p><u>Criterion 2 : Non-solar fuel use</u></p> <p>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</p>

Part C: Bond structures

Area	Requirement
Project Holding	The issuer of a climate bond shall continue to hold nominated projects and assets which have a value at least equal to the original principal amount of the bond at the time of issuance or the amount outstanding as the case may be.
Earmarking	The Issuer of the bond shall maintain the earmarking process to manage and account for funding to the nominated projects and assets.