

## Meidensha Green Bonds

For Green bond eligibility pre-issuance

## DNV GL Verification Report



Jul. 2019 (Rev.1)

DNV GL Business Assurance Japan K.K.

## Executive Summary of Verification and assessment

Meidensha intends to issue the Meidensha Green Bonds (“BOND”) and engaged DNV GL Business Assurance Japan K.K.(“DNV GL”) as external reviewer for Verification and Assessment. The BOND includes eligible green projects and contribution to SDGs, as below and table;

### Eligible green projects portfolio:

#### Mass-production facilities\* for electric vehicle (EV/PHE/HV) 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*

DNV GL has performed the Pre-issuance Verification and Assessment of the BOND. It is DNV GL’s responsibility to provide an independent verification statement on the compliance of the BOND with the Climate Bonds Standard v2.1 and assessment of the BOND which is accordance with Green Bond Principles (ICMA, 2018) and Green Bond Guidelines (MOE, Japan 2017).

Considering all of the above assessments, DNV GL has confirmed that the nominated green projects of Meidensha are designed and are planned to be executed in accordance with related criteria of the BOND.

This verification and assessment report summarize the project portfolio and its general information against relevant criteria of the BOND. DNV GL has confirmed that each project in this verification conform the criteria and eligibility (e.g. technical sector criteria, CO<sub>2</sub> emission[g-CO<sub>2</sub>/person-km] from passenger vehicle satisfies the upper emission threshold). Necessary and sufficient information about the Meidensha green bonds will be provided publicly (e.g. legal document) by Meidensha, before issuance.

Project	Category (Environmental benefit)	Sub-category	Fund Amount (Maturity)	Linkage/Contribution to SDGs
<b>01 Nagoya Works</b> <sup>*1</sup>	Clean Transportation  (CO <sub>2</sub> emission reduction)	EV, PHEV and HV component (motor and inverter) for light-duty vehicle[automobile]	6 billion JPY (5 years)	Goal 7 : Contributing to the electrification of automobiles by manufacturing and selling motors and inverters for PHEVs, and EVs  Goal 13 : We provide eco-friendly products and services and contribute to reducing GHG emissions   
<b>02 Kofu Meidensha Electric Mfg. Co., Ltd.</b> <sup>*2</sup>				
<b>03 Numazu Works</b> <sup>*3</sup>				

<sup>\*1</sup> Renovation of existing buildings and introduction of new facilities (solely to enable the installation of new equipment and/or upgrade existing equipment), <sup>\*2</sup> Construction of new building and introduction of new facilities, including roof-top type solar PV <sup>\*3</sup> Expansion of facilities

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Revision	Issued date	Remarks
Initial issue	28 <sup>th</sup> . Feb. 2019	Initial issue
Revision 1	5 <sup>th</sup> . Jul. 2019	- Additional assessment for Solar PV installed in Kofu Meidensha Electric Mfg. Co., Ltd (Project 02, roof-top type on the manufacturing plant) as secondary environmental benefit - Fund amount and bond maturity are updated

## I Introduction (About issuer and green bond)

### i. About Meidensha

Meidensha was formed in 1897 by Mr. Housui Shigemune as electrical machinery works and celebrating 120th anniversary last year. Meidensha head office is located Shinagawa, Tokyo with 8,995 employees and has 37 consolidated company.

Meidensha launched their work addressing to transit domestic production of electrical machinery production and successfully contributed to build out industrial motors.

Meidensha has expanded their business to manufacturing and sales of heavy electrical machinery products related to power generation, transformer and power distribution as well as automobile test equipment, electrical equipment products and maintenance service, etc. from pre-world war 2 to high-growth period.

In recent year, Meidensha focuses on the environmental friendly business and momentum of growing sector as follows ;

- Driving motors and inverters for electric vehicle (PHEV, EV)
- Products and Systems for renewable energy (Solar PV, Hydropower)
- Global business development
- Semi-conductor business

Based on Meiden Group Corporate Philosophy, Meiden group unfurls business activity to contribute the further development of domestic and global social infrastructures.

## ii. Environmental Strategy of the Group

### (1) Promoting Strategic Environmental Management

As a medium-term guideline to assist Meidensha in advancing environmental management, the Meiden Group has formulated an Environmental Vision that indicates the stance that Meidensha should adopt and the appropriate direction for their environmental activities. Meidensha seeks to contribute to the realization of a sustainable society by means of the reduction of the environmental impact resulting from their business activities and the deployment of the businesses, products and technologies that Meidensha has developed to date in the fields of energy and water treatment to support social infrastructure.

#### 【Targets that Express Meiden Environmental Vision】

Mitigating Climate Change

Conserving Resources (Building a Recycling Society)

Conserving biodiversity

Foster a corporate culture that highly values the environment

### (2) Mid-long term target and environmental management

The Meiden Group seeks to reduce GHG emissions from their business activities by 30% (compared to fiscal 2017) by fiscal 2030. Meidensha are starting by aiming for a 4% reduction by fiscal 2020 under the Medium-term Management Plan 2020, and will reconsider their targets periodically going forward. Meidensha chose this target taking account of the Paris Agreement\*<sup>1</sup> and its Science Based Targets (SBT) of 2°C.\*<sup>2</sup> Meidensha works with their stakeholders in the Meiden Group's supply chain, including customers and business partners, to set common objectives for the challenges they share.

\*1. Paris Agreement: A new framework for tackling global warming from 2020, adopted by the 21st Conference of the Parties (COP21) to the UN Framework Convention on Climate Change.

\*2. 2°C target: The target of keeping the increase in average temperatures to within 2°C of what they were before the Industrial Revolution.



iii. Meidensha Green Bonds

As to realize Meidensha’s mission, Meidensha intends to issue the green bond which contributes environmental and SDGs.

Table-1 shows benefit and contribution of the Meidensha green bonds.

Schedule-1 shows the list of green projects and assets as Project 01-03.

Table-1 Benefit of the Meidensha green bonds and Linkage with SDGs

Project	Category (Environmental benefit)	Sub-category	Fund Amount (Maturity)	Linkage/Contribution to SDGs
<b>01 Nagoya Works</b> <sup>*1</sup>	Clean Transportation (CO <sub>2</sub> emission reduction)	EV, PHEV and HV component(motor and inverter) for light-duty vehicle[automobile]	6 billion JPY (5 years)	Goal 7 : Contributing to the electrification of automobiles by manufacturing and selling motors and inverters for PHEVs, and EVs  Goal 13 : Providing eco-friendly products and services and contribute to reducing GHG emissions   
<b>02 Kofu Meidensha Electric Mfg. Co., Ltd.</b> <sup>*2</sup>				
<b>03 Numazu Works</b> <sup>*3</sup>				

\*1 Renovation of existing buildings and introduction of new facilities (solely to enable the installation of new equipment and/or upgrade existing equipment)

\*2 Construction of new building and introduction of new facilities, including roof-top type solar PV

\*3 Expansion of facilities

## II Scope and Objectives

As per the description in cover letter “DNV GL verification report”, 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 Pre Issuance verification and assessment of the BOND as an independent and approved verifier under the CBS v2.1<sup>\*1</sup>. DNV GL’s criteria and information covered to achieve this is described under ‘Work Undertaken’ below. DNV GL is also engaged to assess the BOND to conform the GBP2018<sup>\*2</sup> and GBG2017<sup>\*3</sup> as relevant criteria.

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

\*2: Green Bond Principles (June 2018, International Capital Market Association)

\*3: Green Bond Guidelines, 2017 (March 2017, Ministry of the Environment, Japan)

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)**

In addition to and separate from DNV GL performing a Pre-Issuance Verification on the compliance of the BOND with the CBS v2.1 and the associated Sector Technical Criteria, DNV GL has conducted a qualitative review of the of the BOND eligibility to consider their alignment with GBP2018 and GBG2017.

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

Meidensha intends to distribute any unallocated proceeds in line with the Use of Proceeds and Management of Proceeds sections set out in the Meidensha Green Bonds Framework.

DNV GL has been commissioned by Meidensha to provide a Meidensha Green Bonds pre-issue verification against CBS v2.1 and assessment opinion related bond criteria. Our methodology to achieve this is described under 'V. Work Undertaken' below. We were not commissioned to provide independent assurance or other audit activities.

The scope of this DNV GL opinion is limited to the CBS v2.1. DNV GL also considered the requirements of the GBP2018 and GBG2017 (MOE, Japan 2017) during its verification and assessment, then, 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) are available for Issuer use.



### **III Responsibilities of the Directors of Issuer(Meidensha) and the assurance providers, 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.

## IV 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 requirements of the CBS v2.1 and the associated Sector Technical Criteria. The detail of areas covered in the DNV GL verification is summarized in Schedule 2 below.

As per DNV GL's Protocol for assessment, in addition to the CBS v2.1 above, DNV GL also considers the criteria against which the BOND has been reviewed are grouped under the four Principles (GBP2018 and GBG2017) as follows:

- **Principle One: Use of Proceeds.** The Use of Proceeds criteria are guided by the requirement that an issuer of a green bond must use the funds raised to finance eligible activities. The eligible activities should produce clear environmental benefits.
  - **Principle Two: 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 green bond reporting specified requirements 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.
-

## V 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:

### **Pre-Issue Verification against CBS v2.1**

- Creation and execution of a Climate Bonds Standard Protocol, to include the relevant Sector Technical Criteria for the 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, an onsite visit (if required) for documentation review and interview with key personnel from Meidensha.
- Discussions with Meidensha management, and review of relevant documentation;
- Documentation of findings against each element of the criteria. Our opinion as detailed below is a summary of these findings.

Also, consideration will be held regarding the alignment with relevant criteria GBP2018 and GBG2017 as described above, and contribution towards United Nations Sustainable Development Goals in this BOND.

### **Assessment for alignment with relevant criteria GBP2018 and GBG2017**

Schedule-3 shows assessment summary against GBP2018 and GBG2017

- Principle One : Use of Proceeds
- Principle Two : Process for Project Evaluation and Selection
- Principle Three : Management of Proceeds
- Principle Four : Reporting

### **Consideration of the Bond Use of Proceeds against the 17 UN SDGs;**

- SDGs Goal 7 : Ensure access to affordable, reliable, sustainable and modern energy for all
- SDGs Goal 13 : Take urgent action to combat climate change and its impacts  
<https://www.mofa.go.jp/policy/oda/sdgs/index.html>

## VI Findings and DNV GL's opinion

DNV GL has performed a Pre 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 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. As relevant criteria GBP2018 and GBG2017 assessment based on each criterion can be consolidated to evaluate with CBS v2.1, verification and assessment result are described as one in latter contents.

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.

### Pre 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 accordance with the requirements described above.

Considering all of the above assessments, DNV GL has confirmed that the nominated green projects of Meidensha are designed and are planned to be executed in accordance with related criteria of the bond (Climate Bonds Standard v2.1, Green Bond Principles 2018 and Green Bond Guidelines, 2017 by Ministry of the Environment, Japan) through the pre issuance verification.

### 1. Principle One, Use of Proceed

DNV GL has confirmed that the proceeds from the BOND issued by Meidensha will be allocated to the one project portfolio [3 projects] which meets the green bond criteria below;

#### 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.

All the proceeds will be financed and/or refinanced to the green projects.

Detail information about green projects are followings

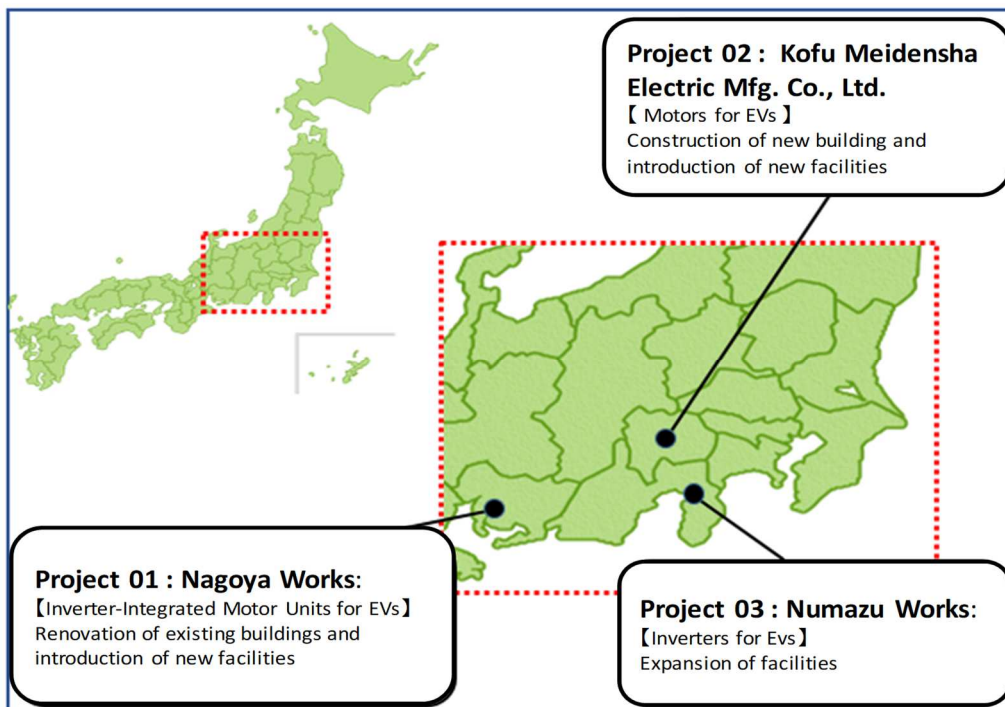


Figure-1 Project locations and products

Table-1 Outline of Meidensha Green Bonds Project (Plan)

<b>Project 01 : Nagoya Works:</b> 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	Scheduled for November 2019
Total floor space	4,620 m <sup>2</sup>
Production capacity	Maximum annual production of 170,000 units
-	
<b>Project 02 : Kofu Meidensha Electric Mfg. Co., Ltd.:</b> 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	Scheduled for November 2019
Total floor space	2,660 m <sup>2</sup>
Production capacity	Maximum annual production of 170,000 units
Remark	Equiped with roof-top solar PV (approx. 300kW)
<b>Project 03 : Numazu Works:</b> 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 <sup>2</sup>
Production capacity	Maximum annual production of 120,000 units

[http://www.meidensha.com/news/news\\_03/news\\_03\\_01/1228557\\_3190.html](http://www.meidensha.com/news/news_03/news_03_01/1228557_3190.html)



Nagoya Works



Kofu Meidensha  
Electric Mfg. Co., Ltd.



Numazu Works

Figure-2 Project location (Meidensha website)



<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

## 2. Principle Two, Process for Project Evaluation and Selection

DNV GL has confirmed that the green 3 projects described in the Schedule-1, were evaluated and selected through the appropriate process by the relevant department of Meidensha, based on its 'Environmental Strategy of the Group'. Meidensha has evaluated and selected the nominated project against to CBSv2.1, GBP2018 and GBG2017.

DNV GL confirmed that nominated 3 projects of green bond were selected and evaluated by Meidensha accounting & Financing group, Financing division, and production headquarter Environmental strategic division, then final approval of the project selection was implemented by director of Financing.

Meidensha determines that implementation of these projects have certain environment benefits quantitatively [low CO<sub>2</sub> emission compared with existing conventional light duty vehicle fuel consumption(using gasoline base)<sup>\*1</sup> and upper threshold of CBS requirement<sup>\*2</sup>, table-2] based on their evaluation.

DNV GL confirmed that nominated project contributes to expand EV, PHEV, HV market growth<sup>\*3</sup>. DNV GL also confirmed that environmental impact has been demonstrated and confirmed its eligibility by CO<sub>2</sub> emission reduction including estimation process by Meidensha and to meet criteria of CBS technical criteria. In addition, regarding the solar PV power generation facility (Project 02 Kofu Meidensha Electric Mfg. Co., Ltd., roof-top type on the manufacturing plant, approx. 300kW) also meets the criteria of CBS.

\*1 : <http://www.mlit.go.jp/k-toukei/search/pdf/22/22201600a00000.pdf>

\*2 : Low Carbon Land Transportation(version1.0) Table 2 Page 12 of 20, CBI

\*3: Low Carbon Land Transportation(version1.0) 2.2 Vehicle technology b. Page 5 of 20, CBI



Table-2 Possible threshold of CO<sub>2</sub> emission per unit(gCO<sub>2</sub>/person-km)  
 Table 2 below presents the IEA 2DS emissions targets for p-km/t-km in 2015 through to 2050<sup>19</sup>. The Standard will re-evaluate the targets after the first round of projects.

Climate Bonds Standard and Certification Scheme: LC Transport Technical Working Committee



**Table 2: Possible threshold options for new land transport products and projects based on IEA Mobility Model data**

Direct emissions	2000	2010	2015	2020	2030	2050
IEA 2DS Passenger Activity (gCO <sub>2</sub> per p-km)	107	94	87	75	56	33
IEA 2DS Freight Activity (gCO <sub>2</sub> per t-km)	35	30	27	25	21	18

As for the negative impact caused by these projects (e.g. energy consumption, water usage, waste production from construction work and production work, etc), appropriate countermeasures and practical action plans, according to the evaluation by external expertise firm, which comply with relevant regulations, laws and relevant internal rules and systems to secure environment have been taken and will be taken after the evaluation. DNV GL confirmed that Meidensha resulted that its effect is limited and appropriate action will be executed if required.

### 3. Principle Three, Management of Proceeds

DNV GL has reviewed and confirmed Meidensha's plans to trace/manage the proceeds from the BOND, from the time of issuance to the time of disbursement, as well as the appropriateness and clarity of their plan to manage total amount of the proceeds. Meidensha will manage the cash or cash equivalents which equals to fund, until decision of the proceed allocation. DNV GL has confirmed that Meidensha will review the outstanding balance of the BOND at least annually. Total amount of fund has not been defined in this document, that will be disclosed in the legal documentation.

Details are as below.

- The proceeds will be managed by Meidensha accounts & finance group finance division. The proceeds outstanding balance will be managed Meiden internal form (earmarked by numbering) and tracked its budget and actual expense with Meidensha internal protocol (accounting management scheme) every month. These will be requested to approve Meidensha financing director to avoid deviation (financial outflow) every quarter.
- Meidensha also manages relevant documents under Meidensha internal accounting protocol and preserves them using document control form.
- Management of proceeds will be disclosed to investors in legal document before issuance

As stated above, DNV GL provides no assurance regarding the financial performance of the BOND, the value of any investments in the BOND, or the effects of the transaction.



#### 4. Principle Four, Reporting

DNV GL has confirmed that Meidensha has plans to report/disclose the specific information required by the Climate Bonds Standard(version2.1) and relevant criteria, on Meidensha's website annually. These will include descriptions of the project lists, progress of refinance (amount or share), and management of the proceeds invested, as well as the associated qualitative or quantitative environmental impacts (CO<sub>2</sub> emission reduction t-CO<sub>2</sub>/year), if possible considering business confidentially.

**Consideration of the BOND Use of Proceeds against the 17 UN SDGs;**

In addition to the Pre Issuance verification against the requirements of the CBS v2.1 and associated criteria, DNV GL has confirmed the Use of Proceeds and nominated projects and assets associated with the BOND for alignment with, and contribution towards, the UN SDGs\*1 in the following table-3, by Meidensha.

Table-3 the relationship between eligible project and SDGs

GOAL	Major business activities contributing to solution
	We contribute to the electrification of automobiles by manufacturing and selling motors and inverters for PHEVs and EVs
	We provide eco-friendly products and services and contribute to reducing GHG emissions

\*1 : GREEN AND SOCIAL BONDS: A HIGH-LEVEL MAPPING TO THE SUSTAINABLE DEVELOPMENT GOALS(Jun. 2018ICMA)

DNV GL Business Assurance Japan K.K.

5<sup>th</sup>. July. 2019



**Mark Robinson**

Manager, Sustainability Services

DNV GL – Business Assurance, Australia



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Managing Director

DNV GL – Business Assurance Japan K.K.



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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.

## Schedule-1 Nominated Green bond project & assets outline

Table-1 Meidensha Green Bonds Project

Project No.	Nominated Project/Asset	Green Project Category	Green Project Sub-Category	Remarks (Plan) 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 : 10%)	Clean Transportation	EV, PHEV and HV component for light-duty vehicle(automobile)	Location: Kiyosu City, Aichi Prefecture Operation from : Nov. 2019 Capacity : 4,620m <sup>2</sup> , 170,000 units/year(max.)
02	Kofu Meidensha Electric Mfg. Co., Ltd.: Construction of new building and introduction of new facilities* <sup>1</sup>  (refinance share : 10%)	Clean Transportation	EV, PHEV and HV component for light-duty vehicle(automobile)	Location: Chuo City, Yamanashi Prefecture Operation from : Nov. 2019 Capacity : 2,660m <sup>2</sup> , 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 <sup>2</sup> , 120,000 units /year(max.)
Total Exposure : approx. 7 billion JPY				
Bond amount : 6 billion JPY (Bond maturity : 5 years)				

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

Described as in table-1 is information at the pre-issuance stage and may be possibility changed.

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

## Schedule-2 Green Bond Eligibility checklist

Meidensha Green Bonds Framework and Amendment to Shelf Registration Statement will be published for explanation to investor

Following GBP-1~GBP-4 are based on Green Bond Principles (GBP, ICMA, 2018) and considering the Green Bond Guidelines (GBG, MOE, 2017). DNV GL established checklist according to the above guideline and principles. DNV GL describes Work undertaken and our findings in the checklists

### GBP-1 Use of proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
1a	Type of bond	<p>The bond must fall in one of the following categories, as defined by the Green Bond Principles:</p> <ul style="list-style-type: none"> <li>• Green Use of Proceeds Bond</li> <li>• Green Use of Proceeds Revenue Bond</li> <li>• Green Project Bond</li> <li>• Green Securitized Bond</li> </ul>	<p>Document reviewed:</p> <ul style="list-style-type: none"> <li>-Meidensha green bonds framework</li> <li>-Draft of amendment to shelf registration statement</li> </ul> <p>Discussions with Meidensha management</p>	<p>The reviewed evidence confirms that the BOND falls in the category:</p> <p>‘Green Use of Proceeds Bond’</p>
1b	Project Categories	<p>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.</p>	<p>Document reviewed:</p> <ul style="list-style-type: none"> <li>-Meidensha green bonds framework</li> <li>-Draft of amendment to shelf registration statement</li> </ul> <p>Discussions with Meidensha management</p>	<p>As identified by the purpose of the BOND is to use the proceeds to finance and refinance for projects falling under the following categories ;</p> <p>&lt; Mass-production facilities* for electric vehicle (EV) parts&gt;</p> <p>01 Nagoya Works 02 Kofu Meidensha Electric Mfg. Co., Ltd. 03 Numazu Works</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
				<p>*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</p> <p>DNV GL's assessment concluded that these asset and project would present eligible project against green bond principles and green bond guidelines. Above information is included in official bond statements such as amendment to shelf registration statement. DNV GL also confirm that Meidensha has evaluated that project implementation (such as plant construction and operation) present low risk of detrimental environmental risk (negative impact) by investigation by law. DNV GL concluded that 1b requirement is satisfied.</p>
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.	Document reviewed: -Meidensha green bonds framework -relevant document of environmental evaluation (external and internal) Discussions with Meidensha management	<p>DNV GL, as CBI verifier, assessed and verified eligibility of the project [3 mass-production facilities for electric vehicle (EV/PHEV/HV) parts] through relevant criteria such as Low carbon land transportation as well as CBS, Green Bond Principles and Green Bond Guidelines.</p> <p>DNV GL confirmed that Meidensha has evaluated its benefit qualitatively (performance indicator : CO<sub>2</sub>) and quantitatively(ton-CO<sub>2</sub>/year emission reduction).</p> <p>DNV GL reviewed the document and explanation provided by Meidensha that Meidensha already identified the environmental risk and addressed appropriate countermeasures, if any. DNV GL concluded that 1c requirement is satisfied.</p>
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, also	Document reviewed: -Meidensha green bonds framework - Meidensha green bonds plan	<p>The proceeds of the BOND, as below, will be used as refinance the project and asset. Refinance share will be disclosed in legal document prior to bond issuance</p> <p>01 Nagoya Works (partially refinance)</p>



Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
		clarify which investments or project portfolios may be refinanced.	Discussions with Meidensha management	02 Kofu Meidensha Electric Mfg. Co., Ltd. (partially refinance) 03 Numazu Works (mainly refinance)

## GBP-2 Process for Project Evaluation and Selection

Ref.	Criteria	Requirements	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"> <li>• A process to determine how the projects fit within the eligible Green Projects categories identified in the Green Bond Principles;</li> <li>• The criteria making the projects eligible for using the Green Bond proceeds; and</li> <li>• The environmental green objectives</li> </ul>	<p>Document reviewed:</p> <ul style="list-style-type: none"> <li>-Meidensha green bonds framework</li> <li>- Meidensha green bonds plan</li> </ul> <p>Discussions with Meidensha management</p>	<p>As per the Meidensha green bonds framework, the issuer has set out the following criteria for project selection.</p> <p><b>&lt;Eligible Green Projects&gt;</b> means: 3 mass-production facilities for electric vehicle (EV/PHEV/HV) parts including e.g. planning, preparation, construction (upgrading, extension), equipment fabrication, purchase, installation, operation and management. This is categorized clean transportation.</p> <p><b>&lt;Relevant Eligibility Requirements&gt;</b> includes:</p> <ol style="list-style-type: none"> <li>1. Climate Bonds Standard   version 2.1 (Climate Bonds Initiative) and technical criteria (Low carbon land transportation)</li> <li>2. Green Bond Principles (June 2018, International Capital Market Association)</li> <li>3. Green Bond Guidelines, 2017 (March 2017, Ministry of the Environment, Japan)</li> </ol> <p>Those nominated project portfolio is discussed with Meidensha's related department and responsibilities. DNV GL concluded that 2a requirement is satisfied through interview and document review.</p>
2b	Issuer's environmental governance framework	<p>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.</p>	<p>Document reviewed:</p> <ul style="list-style-type: none"> <li>-Meidensha green bonds framework</li> <li>- Meidensha green bonds plan</li> <li>-MEIDENSHA REPORT2018</li> </ul> <p>Discussions with Meidensha management</p>	<p>DNV GL notes that Meidensha published their business report in their website annually which includes corporate mission, ESG activity and EV business statements. After the Meidensha green bonds issuance, Meidensha will provide its specified required information in in their website. It is easy to find for the investor. DNV GL acknowledges the limited information available from Meidensha due to business confidential between Meidensha and their customer. Meidensha provides DNV GL necessary and sufficient information to verify those projects and asset which ensure the eligibility.</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
			<a href="http://www.meidensha.com/csr/csr_06/index.html">http://www.meidensha.com/csr/csr_06/index.html</a> <a href="http://www.meidensha.co.jp/index.html">http://www.meidensha.co.jp/index.html</a>	DNV GL concluded that 2b requirement is satisfied <a href="http://www.meidensha.com/csr/csr_06/index.html">http://www.meidensha.com/csr/csr_06/index.html</a> <a href="http://www.meidensha.co.jp/index.html">http://www.meidensha.co.jp/index.html</a>

## GBP-3 Management of proceeds

Ref.	Criteria	Requirements	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.	Document reviewed: -Meidensha green bonds framework - Meidensha accounting management documents (confidential, internal document) Discussions with Meidensha management	The evidence reviewed shows how Meidensha plans to trace the BOND's proceeds, from the time of issuance to the time of disbursement. Since bond proceeds sub-portfolio management is carried out by the bond proceeds management form, so that the Meidensha can keep track of the amount allocated and unallocated balance for each project (Bond proceeds are deposited in the same account as other funds). The details of the disbursement and the outstanding value will be tracked in Meidensha's internal accounting protocol/system. At the end of each financial period (every quarter), the outstanding balance of the BOND will be reviewed by Meidensha financial management. DNV GL concluded that 3a requirement is satisfied.
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.	Document reviewed: -Meidensha green bonds framework - Meidensha accounting management documents (confidential, internal document) Discussions with Meidensha management	In the proceeds management form, the balance is adjusted and managed on a monthly basis, so that the total amount of proceeds to the budget for each project coincides with the allocated amount and the unallocated balance. At the end of each financial period (every quarter), the outstanding balance of the BOND will be reviewed by Meidensha financial management. DNV GL concluded that 3b requirement is satisfied.
3c	Temporary holdings	Pending such investments or disbursements to eligible Green Projects, the issuer should make known to	Document reviewed: -Meidensha green bonds framework - Meidensha accounting management	It is stated clearly on the Meidensha Green Bonds Framework that the actual unallocated balance should be kept as cash or cash equivalents. All the proceed will be

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
		investors the intended types of temporary investment instruments for the balance of unallocated proceeds.	documents (confidential, internal document) Discussions with Meidensha management	allocated nominated eligible projects and assets in one year. DNV GL concluded that 3c requirement is satisfied.

## GBP-4 Reporting

Ref.	Criteria	Requirements	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"> <li>- when possible with regards to confidentiality and/or competitive considerations</li> <li>- a brief description of the projects and the amounts disbursed, as well as the expected environmentally sustainable impact.</li> </ul>	<p>Document reviewed:                      -Meidensha green bonds framework                      Discussions with Meidensha management</p>	<p>Meidensha will publish information which include specified contents on the Green Bond in its website. This will include description of the project and value of the proceeds invested, as well as the associated qualitative and quantitative environmental impacts. Meidensha plans to report the expected environmentally sustainable impact as total CO<sub>2</sub> emission reduction evaluation (ton-CO<sub>2</sub>/year) based on products amount annual basis.                      *Meidensha considers confidentiality and/or competitive.                      DNV GL concluded that 4a requirement is satisfied.</p>