



WHEN TRUST MATTERS



# KOREA DEVELOPMENT BANK (KDB) INVESTMENT NEWSLETTER PERIODIC REVIEW



**Document title:** Periodic Review on 2023 KDB Investment Newsletter

**Prepared by:** DNV Business Assurance Korea Ltd.

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This statement is valid until the Investor Newsletter provided in March 2023 remains unchanged.

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### Disclaimer

Our assessment relies on the premise that the data and information provided by the client to us as part of our review procedures have been provided in good faith. Because of the selected nature (sampling) and other inherent limitation of both procedures and systems of internal control, there remains the unavoidable risk that errors or irregularities, possibly significant, may not have been detected. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied as per scope of work. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Statement.

### Statement of Competence and Independence

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2015 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV Code of Conduct<sup>1</sup> during the assessment and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV was not involved in the preparation of statements or data included in the Framework except for this Statement. DNV maintains complete impartiality toward stakeholders interviewed during the assessment process.

<sup>1</sup> DNV Code of Conduct is available from DNV website ([www.dnv.com](http://www.dnv.com))

## DNV'S INDEPENDENT ASSESSMENT

### Scope and Objectives

Since 2019, Korea Development Bank (hereafter, "KDB" or the "Company") has issued 14 green bonds with the total amount of USD 3,401 million and 1 social bond with the total amount of USD 500 million. The bonds were issued on the basis of KDB's Sustainable Financing Framework (hereafter, the "Framework") which was published in June 2019 and verified by Sustainalytics with its Second Party Opinion (SPO).

DNV has been commissioned by KDB to provide the review of 2023 KDB Investor Newsletter which is the annual summary report of the proceeds allocation and environmental and social impacts of the bonds. Our criteria and information covered to serve the purpose are described under 'Work Undertaken' shown below. The periodic review was made based on the information and documents provided by KDB as well as the interview conducted with them and correspondence exchanges. We do not provide any independent assurance or other type of audit activities.

In this report, no assurance is provided regarding the financial performance of the Issuer, the value of any investments in the bonds, or the long-term environmental benefits arising from the nominated projects. Our main objective of these reviews has been to provide an assessment that the bonds has met the criteria established on the basis set out below.

### Responsibilities of the Management of KDB and DNV

The management of KDB has provided the information and data used by DNV during the delivery of this review. Our statement represents an independent opinion and is intended to inform KDB management and other interested stakeholders in the bonds 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 KDB. DNV is not responsible for any aspect of the nominated assets referred to in this 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 KDB used as a basis for this assessment were not correct or complete.

### Basis of DNV's opinion

- **Principle One: Use of Proceeds.** The Use of Proceeds criteria are guided by the requirement that issuers of bonds must use the funds raised to finance eligible activities. The eligible activities should produce clear environmental and social benefits.
- **Principle Two: Process for Project Evaluation and Selection.** The Project Evaluation and Selection criteria are guided by the requirements that issuers of bonds should outline the process they follow when determining eligibility of an investment using green and/or social 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 sustainability bonds 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 review of the available information, based on the understanding that this information was provided to us by KDB 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:

- Creation of a Protocol, adapted to the purpose of the annual and impact report, as described above and in Schedule 3 to this Assessment;
- Assessment of documentary evidence provided by KDB on the annual report and supplemented by a high-level desktop research. These checks refer to current assessment best practices and standards methodology;
- Review of published materials by KDB and KDB's website;
- Discussions with KDB's responsible people, and review of relevant documentation and evidence related to the criteria of the Protocol; and
- Documentation of findings against each element of the criteria. Our opinion as detailed below is a summary of these findings.

## Findings and DNV's Opinion

DNV's findings are listed below:

1. **Principle One: Use of Proceeds.** KDB has reported use of the proceeds of the bonds to finance and refinance projects and assets including:

### *Green Projects*

- Renewable Energy (Onshore and offshore wind power, and solar power)
- Clean Transportation (EV battery)
- Sustainable Water Management and Wastewater Management (Flooding mitigation)

### *Social Projects*

- COVID-19 Responding Loans (Regions severely damaged by the pandemic and most adversely affected industries)


DNV reviewed the criteria for the project categories above to determine the eligibility of the nominated projects and assets. DNV can confirm that proceeds were used for eligible green and social projects mentioned in the Framework.

2. **Principle Two: Process for Project Evaluation and Selection.** The bonds' proceeds have been allocated to finance and refinance the assets as defined in Schedule 1. DNV has reviewed evidence that demonstrates that KDB regularly assesses opportunities for improvement and devises action plans and initiatives to mitigate negative environmental impact from its operations.
3. **Principle Three: Management of Proceeds** DNV has reviewed evidence showing how KDB traced the proceeds from the bonds, from the time of issuance to the time of disbursement. The full amount of the proceeds will be managed within its existing accounting system, and thereafter disbursed in accordance with its financing schedule. The details of the disbursement and the outstanding value will be tracked using KDB's internal financial reporting system. At the end of each financial period, KDB reviews the outstanding balance of the bonds. As stated above, DNV provides no assurance regarding the financial performance of the bonds, the value of any investments in the Bond, or the effects of the transaction.
4. **Principle Four: Reporting.** KDB has confirmed that it will upload its impact report in its website. This includes a description of the project and value of the proceeds invested, as well as the associated qualitative and quantitative environmental and social impacts.

On the basis of the information provided by KDB and the work undertaken, it is DNV's opinion that the bonds meets the criteria established in the Protocol and that it is aligned with the Green and Social Bond Principles, which is to "enable capital-raising and investment for new and existing projects with environmental and social benefits."

**for DNV Business Assurance Korea Ltd.**

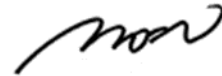
Seoul, Republic of Korea / 27 March 2023



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## Schedule 1. Nominated Assets

### Green Bond

(Unit: USD mn)

Green Bond Series	Sector	Total Project Size	KDB Share	Disbursed Outstanding Amount	To be Disbursed	Status of Projects	
						Operation	Construction
<b>2<sup>nd</sup> Green Bond</b>	Solar	541	165	71	0		
EUR 500mn	Offshore Wind	8,190	307	188	10		
(XS2022179159)	Onshore Wind	455	144	115	0		
	<b>Sub Total</b>	<b>9,186</b>	<b>616</b>	<b>374</b>	<b>10</b>	<b>100%</b>	<b>0%</b>
<b>3<sup>rd</sup> Green Bond</b>	EV Battery	2,211	267	267	-		
USD700mn	Offshore Wind	12,400	267	164	72		
(US500630DF23)	Solar	228	112	63	-		
	<b>Sub Total</b>	<b>14,839</b>	<b>645</b>	<b>494</b>	<b>72</b>	<b>67%</b>	<b>33%</b>
<b>4<sup>th</sup> Green Bond</b>	Offshore Wind	2,975	40	40	-		
USD300mn	Onshore Wind	1,326	258	202	1		
(US500630DK18)	<b>Sub Total</b>	<b>4,301</b>	<b>297</b>	<b>242</b>	<b>1</b>	<b>83%</b>	<b>17%</b>
<b>5<sup>th</sup> Green Bond</b>	Offshore Wind	3,527	136	31	106		
IDR 1,425bn							
(XS2351219055)	<b>Sub Total</b>	<b>3,527</b>	<b>136</b>	<b>0</b>	<b>136</b>	<b>0%</b>	<b>100%</b>
<b>6<sup>th</sup> Green Bond</b>	Solar	618	58	44	14		
CHF 200mn	Offshore Wind	4,061	120	84	36		
(CH1121837228)	<b>Sub Total</b>	<b>4,679</b>	<b>178</b>	<b>128</b>	<b>50</b>	<b>0%</b>	<b>100%</b>
<b>7<sup>th</sup> Green Bond</b>	Solar	120	40	17	26		
USD 20mn							
(XS2395577674)	<b>Sub Total</b>	<b>120</b>	<b>40</b>	<b>17</b>	<b>26</b>	<b>0%</b>	<b>100%</b>
<b>8<sup>th</sup> Green Bond</b>	Solar	1,494	234	88	146		
USD 700mn	EV Batteries	2,143	463	463	-		

Green Bond Series	Sector	Total Project Size	KDB Share	Disbursed Outstanding Amount	To be Disbursed	Status of Projects	
						Operation	Construction
<i>(US500630DM73)</i>	<b>Sub Total</b>	<b>3,637</b>	<b>697</b>	<b>551</b>	<b>146</b>	<b>30%</b>	<b>70%</b>
<b>9th Green Bond</b>	Flooding Mitigation	1,422	200	-	200		
BRL 1,285mn	Offshore Wind	857	59	59	-		
<i>(XS2452429645)</i>	<b>Sub Total</b>	<b>2,279</b>	<b>259</b>	<b>59</b>	<b>200</b>	<b>0%</b>	<b>100%</b>
<b>10 Green Bond</b>	EV Battery	311	40	40	-		
USD 40mn							
<i>(XS2458348294)</i>	<b>Sub Total</b>	<b>311</b>	<b>40</b>	<b>40</b>	<b>-</b>	<b>100%</b>	<b>0%</b>
<b>11th Green Bond</b>	EV Battery	1,284	107	107	-		
CHF 225mn							
<i>(CH1178184424)</i>	<b>Sub Total</b>	<b>1,284</b>	<b>107</b>	<b>107</b>	<b>-</b>	<b>100%</b>	<b>0%</b>
<b>12th Green Bond</b>	Offshore Wind	3,526	64	59	5		
<b>13th Green Bond</b>							
<b>14th Green Bond</b>	<b>Sub Total</b>	<b>3,526</b>	<b>64</b>	<b>59</b>	<b>5</b>	<b>100%</b>	<b>0%</b>
<b>15th Green Bond</b>	Solar	960	67	67	-		
MXN 3,500mn							
<i>(MXCDKD000007)</i>	<b>Sub Total</b>	<b>960</b>	<b>67</b>	<b>67</b>	<b>-</b>	<b>100%</b>	<b>0%</b>
<b>Grand Total</b>		<b>48,650</b>	<b>3,147</b>	<b>2,189</b>	<b>594</b>		

## Social Bond

Project Category	Loan Amount (USD '000,000)	No. of Borrowers	Loan per Borrower (USD '000)
Regions severely damaged by the pandemic	343 (88%)	688	498
Most adversely affected industries	49 (12%)	133	366
<b>Total</b>	<b>391 (100%)</b>	<b>821</b>	<b>864</b>

## Schedule 2. Impact Reporting

### CO2e Avoided by the green portfolio under KDB Share

Portfolio category	KDB Share USD mn	Estimated CO2e Avoided: t CO2/Year	CO2e Avoided t CO2/USD 1.0mn *
Renewable Energy	2,070	1,446,045	699
Clean Transportation	877	859,931	981
<b>Total</b>	<b>2,947</b>	<b>2,305,976</b>	<b>783</b>

\* Weighted average CO2e Avoided among the projects

### Sustainable Water Management – Flooding Mitigation

Affected area	The number of protected residents	Estimated costs for flood damages prevented	The number of jobs created for the project
44,000 acres	245,000	194.8 million per year	4,185

### Social Impact

Project Category	Loan Amount (USD '000,000)	No. of Borrowers	Loan per Borrower (USD '000)
Regions severely damaged by the pandemic	343 (88%)	688	498
Most adversely affected industries	49 (12%)	133	366
<b>Total</b>	<b>391 (100%)</b>	<b>821</b>	<b>864</b>

KRW1261 per USD 1.00, the foreign exchange rates of December 31, 2022 was used.



### Schedule 3. The KDB-specific Eligibility Assessment Protocol

#### 1. Use of Proceeds

Ref.	Criteria	Requirements	Works Undertaken	DNV Findings
1a	Type of bond / loan	<p>The Bond and Loan must fall in one of the following categories, as defined by the Green/Social Bond Principles:</p> <ul style="list-style-type: none"> <li>Green/Social Use of Proceeds Bond</li> <li>Green/Social Use of Proceeds Revenue Bond</li> <li>Green/Social Project Bond</li> <li>Green/Social Securitized Bond</li> <li>Loan instrument made available for Green and Social project (Green and Social use of loan proceeds)</li> </ul>	<p>Review of:</p> <ul style="list-style-type: none"> <li>2019 KDB Sustainable Bond Framework</li> <li>2023 KDB Investor Newsletter</li> </ul> <p>Discussion with KDB (or a delegated entity)</p>	<p>The reviewed evidence confirms that the bonds fall in the category: Green and Social Use of Proceeds of the Bonds.</p>
1b	Sustainable Project Categories	<p>The cornerstones of Sustainability Bond and Loan are the utilization of the proceeds of the bond and the loan which should be appropriately described in the legal documentation for the security.</p>	<p>Review of:</p> <ul style="list-style-type: none"> <li>2019 KDB Sustainable Bond Framework</li> <li>Sub Project Performance and Financial Documentation</li> <li>2023 KDB Investor Newsletter</li> </ul> <p>Discussion with KDB (or a delegated entity)</p>	<p>As identified by the purpose of the Bonds was to use the proceeds to finance and refinance for projects falling under the following categories:</p> <p>Green Bonds</p> <ul style="list-style-type: none"> <li>Renewable Energy (Onshore and offshore wind power, and solar power)</li> <li>Clean Transportation (EV battery)</li> <li>Sustainable Water Management and Wastewater Management (Flooding mitigation)</li> </ul> <p>Social Bonds</p> <ul style="list-style-type: none"> <li>COVID-19 Responding Loans (Regions severely damaged by the pandemic and most adversely affected industries)</li> </ul>

Ref.	Criteria	Requirements	Works Undertaken	DNV Findings
				<p>Out of USD 3,901mn of proceeds in total, USD 2,189mn (Green Bonds) and USD 391 mn (Social bond) were disbursed. 66% of the proceeds were allocated to green and social assets.</p> <p>DNV's assessment concluded that the above-mentioned assets lead to environmentally and socially positive outcomes and qualify for the Green and Social Bond Principles.</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.	<p>Review of:</p> <ul style="list-style-type: none"> <li>• 2019 KDB Sustainable Bond Framework</li> <li>• Relevant project documents</li> <li>• Environmental impact verification related documents</li> <li>• 2023 KDB Investor Newsletter</li> </ul> <p>Discussion with KDB (or a delegated entity)</p>	<p>DNV reviewed raw data provided by KDB to verify environmental impact of the invested projects and its accuracy of calculation.</p> <ul style="list-style-type: none"> <li>• Renewable Energy: In order to strengthen accuracy of calculation, KDB made use of internationally accepted references such as Assessment of Project GHG Emissions and Emission variations by European Investment Bank, IEA Projected Costs of Generating Electricity and IRENA Energy Profile by Country.</li> <li>• Clean Transportation: In order to strengthen accuracy of calculation, KDB made use of internationally accepted reference such as Assessment of Project GHG Emissions and Emission variations by European Investment Bank and the national data from the U.S. Department of Transportation.</li> </ul> <p>DNV concluded that KDB made use of reliable data source and reasonable assumptions to calculate environmental impact.</p>
1c	Social benefits	All designated Social Project categories should provide clear socially sustainable benefits, which, where feasible, will be quantified or assessed by the Issuer.	<p>Review of:</p> <ul style="list-style-type: none"> <li>• 2019 KDB Sustainable Bond Framework</li> <li>• Relevant project documents</li> <li>• Environmental impact verification documents</li> <li>• 2023 KDB Investor Newsletter</li> </ul> <p>Discussion with KDB (or a delegated entity)</p>	<p>DNV reviewed raw data provided by KDB to verify social impact of the invested projects and its accuracy of calculation. DNV concluded that the proceeds were used for supporting marginal groups affected by COVID-19 in accordance with the Korean Government's guideline. DNV notes that 83% of disbursed loans were allocated for the SMEs with less than 50 employees which were severely impacted by the pandemic among all the SMEs.</p>

Ref.	Criteria	Requirements	Works Undertaken	DNV Findings
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 clarify which investments or project portfolios may be refinanced.	Review of: <ul style="list-style-type: none"> <li>2019 KDB Sustainable Bond Framework</li> <li>2023 KDB Investor Newsletter</li> <li>Sub Project Performance and Financial Documentation</li> </ul> Discussion with KDB (or a delegated entity)	KDB set the look back period of past two years before issuances of the bonds, which is in alignment with market practices.  The refinancing ratio of the Green Bonds is 43% (USD 941mn out of USD 2,189mn).  The refinancing ration of the Social Bond is 72% (KRW 355,982mn out of KRW 493,469mn)

## 2. Process for Project Selection and Evaluation

Ref.	Criteria	Requirements	Works Undertaken	DNV Findings
2a	Investment-decision process	The Issuer of a Sustainability Bond and Loan should outline the decision-making process it follows to determine the eligibility of projects using Sustainability Bond and Loan proceeds. This includes, without limitation: <ul style="list-style-type: none"> <li>A process to determine how the projects fit within the eligible Green and Social Projects categories identified in the Green/Social Bond Principles and Green/Social Loan Principles;</li> <li>The criteria making the projects eligible for using the Sustainability Bond proceeds; and</li> <li>The environmental sustainability objectives, and the social objectivities</li> </ul>	Review of: <ul style="list-style-type: none"> <li>2019 KDB Sustainable Bond Framework</li> <li>2023 KDB Investor Newsletter</li> </ul> Discussion with KDB (or a delegated entity)	DNV's assessment concluded that the Company has taken appropriate measures for the proceeds to be allocated to the eligible green and social projects in accordance with the Framework.
2b	Issuer/borrower's	In addition to information disclosed by an issuer on its Sustainability Bond	Review of: <ul style="list-style-type: none"> <li>KDB Sustainability Policy</li> </ul>	KDB is committed to placing sustainability at the core in its loan providing activities. Its website discloses related activities with the

Ref.	Criteria	Requirements	Works Undertaken	DNV Findings
	environmental and social and governance framework	process, criteria and assurances, Sustainability Bond and Loan 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"> <li>2019 KDB Sustainable Bond Framework</li> <li>2023 KDB Investor Newsletter</li> </ul> Discussion with KDB (or a delegated entity)	Company's Commitments, Corporate Social Responsibility, and E&S Risk Management. <a href="https://www.kdb.co.kr/CHGLIR05N00.act?_mnuId=IHIHEN0028&amp;JEX_LANG=EN">https://www.kdb.co.kr/CHGLIR05N00.act?_mnuId=IHIHEN0028&amp;JEX_LANG=EN</a>

### 3. Bond Characteristics

Ref.	Criteria	Requirements	Works Undertaken	DNV Findings
3a	Tracking procedure	The net proceeds of Sustainability 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/Social Projects.	Review of: <ul style="list-style-type: none"> <li>2019 KDB Sustainable Bond Framework</li> <li>2023 KDB Investor Newsletter</li> <li>KDB ERP system</li> </ul> Discussion with KDB (or a delegated entity)	The evidence reviewed shows how KDB has tracked the bonds' proceeds appropriately, from the time of issuance to the time of disbursement. The details of the disbursement and the outstanding value have been tracked by KDB's internal financial system.  DNV confirmed that KDB's internal process can manage and track the outstanding balance of the Green and Social Bonds.
3b	Tracking procedure	So long as the Sustainability Bonds and Loans 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.	Review of: <ul style="list-style-type: none"> <li>2019 KDB Sustainable Bond Framework</li> <li>2023 KDB Investor Newsletter</li> <li>KDB ERP system</li> </ul> Discussion with KDB (or a delegated entity)	The evidence reviewed shows that KDB has traced the proceeds from the bonds, from the time of issuance to the time of disbursement, and reduced the net balance of proceeds by amounts in line with its financing schedule. At the end of each financial period, the outstanding balance of the Bond was reviewed.
3c	Temporary holdings	Pending such investments or disbursements to eligible Green and Social Projects, the Issuer should make known to investors the intended types of temporary investment instruments for the balance of unallocated proceeds.	Review of: <ul style="list-style-type: none"> <li>2023 KDB Investor Newsletter</li> </ul> Discussion with KDB (or a delegated entity)	KDB has communicated with DNV that unused proceeds are managed as cash in the main deposit account with risk-free deposit rate.

#### 4. Reporting

Ref.	Criteria	Requirements	Works 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 Sustainability 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>Review of:</p> <ul style="list-style-type: none"> <li>KDB Website</li> <li>2023 KDB Investor Newsletter</li> </ul> <p>Discussion with KDB (or a delegated entity)</p>	<p>KDB will upload this Investor Newsletter on its website <a href="https://www.kdb.co.kr/index.jsp">https://www.kdb.co.kr/index.jsp</a>.</p> <p>The Company intends to publish the Impact Report until the net proceeds are fully allocated and upload it on the website.</p>



## 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 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.

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