

Korea Electric Power Corporation

Type of Engagement: Annual Review

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Engagement Team:

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Introduction

In 2019, 2020 and 2021, Korea Electric Power Corporation (KEPCO) issued green bonds aimed at financing and/or refinancing solar photovoltaic and wind power renewable energy projects, new transmission infrastructure connecting renewable energy to grids and clean transportation. In December 2022, KEPCO engaged Sustainalytics to review the projects funded through the issued green bonds and provide an assessment as to whether the projects met the Use of Proceeds criteria and the Reporting commitments outlined in the KEPCO Green Bond Framework 2019¹ and 2021.²

Sustainalytics has previously provided a Second-Party Opinion on the Framework in 2019³ and 2021⁴ and Annual Reviews of the projects funded in 2019, 2020 and 2021.

Evaluation Criteria

Sustainalytics evaluated the projects and assets funded from 2019, 2020 and 2021 bonds based on whether the projects and programmes:

1. Met the Use of Proceeds and Eligibility Criteria outlined in the KEPCO Green Bond Framework; and
2. Reported on at least one of the Key Performance Indicators (KPIs) for each Use of Proceeds criteria outlined in the KEPCO Green Bond Framework.

Table 1 lists the Use of Proceeds, Eligibility Criteria, and associated KPIs.

Table 1: Use of Proceeds Category, Eligibility Criteria and Associated KPIs

Use of Proceeds Category	Eligibility Criteria	Key Performance Indicators
Renewable Energy	<p>Financing or refinancing solar photovoltaic power and wind power projects and research & development expenses related to such projects</p> <p>Investment on expansion of existing renewable-related facilities or construction of new assets</p> <p>Investments on development /installation of new transmission infrastructure or improvement of the existing infrastructure to improve stability issues that arise from abrupt increase in renewable energy generation volume</p>	<ul style="list-style-type: none"> • Renewable MWh generated or purchased • % of electricity consumption from renewable sources • Estimated avoided GHG emissions (tCO₂eq) • Number of power outages avoided • Number of power outages in this year as opposed to previous year
Clean Transportation	Finance or refinance purchase of electric vehicles ("EV") and the investment associated	<ul style="list-style-type: none"> • Number of EV purchases, and

¹ KEPCO Sustainable Finance Framework, (2019), at:

https://home.kepco.co.kr/kepco/cmmn/documentViewer.po?fn=BBS_202005201125196690&rs=/kepco/synap/doc

² KEPCO Sustainable Bond Framework, (2021), at:

https://home.kepco.co.kr/kepco/cmmn/documentViewer.po?fn=BBS_202109090500428990&rs=/kepco/synap/doc

³ KEPCO Sustainable Finance Framework Second Party Opinion, (2019), at:

https://home.kepco.co.kr/kepco/cmmn/documentViewer.po?fn=BBS_202005201123366230&rs=/kepco/synap/doc

⁴ KEPCO Sustainable Finance Framework Second Party Opinion, (2021), at:

https://home.kepco.co.kr/kepco/cmmn/documentViewer.po?fn=BBS_202109090501075990&rs=/kepco/synap/doc

	with construction and installation of EV charging infrastructure.	<ul style="list-style-type: none"> • Estimated % replacement of old diesel or petrol fleet • Number of EV infrastructure constructed and location <p>Estimated GHG emissions reduced (tCO2eq)</p>
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Issuer's Responsibility

KEPCO is responsible for providing accurate information and documentation relating to the details of the funded projects, including description of projects, amounts allocated and project impact.

Independence and Quality Control

Sustainalytics, a leading provider of ESG research and ratings, conducted the verification of use of proceeds from KEPCO's Green bond. The work undertaken as part of this engagement included collection of documentation from KEPCO and review of said documentation to assess conformance with the KEPCO Green Bond Framework.

Sustainalytics relied on the information and the facts presented by KEPCO. Sustainalytics is not responsible nor shall it be held liable for any inaccuracies in the opinions, findings or conclusions herein due to incorrect or incomplete data provided by KEPCO.

Sustainalytics made all efforts to ensure the highest quality and rigor during its assessment process and enlisted its Sustainability Bonds Review Committee to provide oversight of the review.

Conclusion

Based on the limited assurance procedures conducted,⁵ nothing has come to Sustainalytics' attention that causes us to believe that, in all material respects, the reviewed bond projects, funded through proceeds of KEPCO's Green Bond, are not in conformance with the Use of Proceeds and Reporting Criteria outlined in the KEPCO Green Bond Frameworks. KEPCO has disclosed to Sustainalytics that the 2019 Green Bond have been fully allocated by December 2021, the 2020 Green Bond has been fully allocated by July 2021 and the 2021 Green Bond has been fully allocated as of April 2022.

⁵ Sustainalytics limited assurance process includes reviewing the documentation relating to the details of the projects that have been funded, including description of projects, estimated and realized costs of projects, and project impact, which were provided by the Issuer. The Issuer is responsible for providing accurate information. Sustainalytics has not conducted on-site visits to projects.

Detailed Findings

Table 2: Detailed Findings

Eligibility Criteria	Procedure Performed	Factual Findings	Error or Exceptions Identified
Use of Proceeds Criteria	Verification of the projects funded by the green bond in 2019, 2020 and 2021 to determine if projects aligned with the Use of Proceeds Criteria outlined in the KEPCO Green Bond Framework and above in Table 1.	All projects reviewed complied with the use of proceeds criteria.	None
Reporting Criteria	Verification of the projects funded by the green bond in 2019, 2020 and 2021 to determine if impact of projects was reported in line with the KPIs outlined in the KEPCO Green Bond Framework and above in Table 1. For a list of KPIs reported please refer to Appendix 1.	All projects reviewed reported on at least one KPI per use of proceeds category.	None

Appendix

Appendix 1: Allocation Reporting by Eligibility Criteria

Table 3: 2019 Bond allocation reporting

Use of Proceeds Category	Sub-category	Allocation (USD) in millions
Renewable Energy	Solar PV	106.3
	Wind	131.9
	Research and Development- Empirical Study	12.0
	Technology/Strategy Development	69.3
Clean Transportation	Purchase of EVs	21.4
	Construction of EV Charging Infrastructure	159.1
Total		500.0

Table 4: 2020 Bond allocation reporting

Use of Proceeds Category	Sub-category	Allocation (USD) in millions
Renewable Energy: Increasing stability in power supply	New and Renewable Energy Grid Connection Infrastructure	500.0
Total		500.0

Table 5: 2021 Bond allocation reporting

Use of Proceeds Category	Sub-category	Allocation (USD) in millions
Renewable Energy	Solar	39.0
Clean Transportation	Purchase of EVs	0.3
	Construction of EV Charging Infrastructure	29.8
Renewable Energy: Increasing stability in power supply	Connection Facility (Transmission and Substation Facilities)	25.0
	Connection Facility (Distribution)	121.3
	Connection Facility	84.6
Total		300.0

Appendix 2: Impact Reporting by Category

Table 6: Renewable Energy Category – Solar PV and Wind only

Projects	GHG Emissions Avoided (tCO2e)	
	2019 bond- Since project inception (until 2021)	2021 bond- Since project inception (until 2021)
Solar M&A (Colorado, US)	42,805	493
Solar (California, US)	466,230	395
Solar (Chitose, Japan)	62,232	-
Solar (Mexico)	5,464	24,044
Wind Power (Fujeij, Jordan)	303,097	-
Offshore Wind Frame (SW Coast, Korea)	33,271	-
Total	913,099	24,933

Table 7: Clean Transportation Category – Purchase of EV

Year	Total Number of EV Purchase	GHG Emissions Avoided Annually (tCO2e)
2018	24	62
2020	129	336
2021	153	398

Table 8: Clean Transportation Category – Construction of EV Charging Infrastructure

Year	Total Number of Charging Infrastructure constructed	GHG Emissions Avoided Annually (tCO2e)
2017	3,427	103
2018	4,028	967
2019	573	2,704
2020	1,132	3,843
2021	838	6,054

Table 9: Renewable Energy Category – Increasing Stability in Power Supply

Year	Renewable Energy Connection (MW)	Renewable Energy Production (MWh)	GHG Emissions Avoided Annually (tCO2e)
2020	3,567	4,530,803	2,143,070
2021	2,550	1,684,285	796,667

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