

Korea Electric Power Corporation

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Introduction

Since June 2022, Korean Electric Power Corporation (“KEPCO”) issued four green bonds¹ (the “2022 Green Bonds”) and a sustainability bond (the “2023 Sustainability Bond”) to finance or refinance renewable energy projects, renewable energy grid connection infrastructure for increasing stability in power supply, clean transportation, and access to essential services to vulnerable population. In June 2024, KEPCO engaged Sustainalytics to review the projects financed with proceeds from the 2022 Green Bonds and 2023 Sustainability Bond (the “Nominated Projects”) and provide an assessment as to whether the projects meet the use of proceeds criteria and the reporting commitments outlined in the KEPCO Sustainable Bond Framework 2021² which is an update to Sustainable Finance Framework 2019.³ Sustainalytics provided a Second-Party Opinion on the Framework in October 2019⁴ and an update to it in September 2021.⁵ This is Sustainalytics’ third annual review of allocation and reporting of the instruments issued under the Framework, following previous reviews in January 2023⁶ and December 2023.⁷

Evaluation Criteria

Sustainalytics evaluated the Nominated Projects based on whether they:

1. Meet the use of proceeds and eligibility criteria defined in the Framework; and
2. Reported on at least one key performance indicator (KPI) for each use of proceeds category defined in the Framework.

¹ KEPCO issued four green bonds since June 2022: i) issued a green bond of USD 500 million in June 2022 with a maturity period of 3 year; ii) issued a green bond of USD 300 million issued in June 2022 with a maturity period of 5 years; iii) issued a green bond of USD 500 million in September 2022 with a maturity period of 3.5 years; and iv) issued a green bond of USD 300 million in September 2022 with a maturity period of 5.5 years.

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

https://home.kepco.co.kr/kepco/EN/ntcob/list.do?boardCd=BRD_000581&menuCd=EN030407

³ KEPCO, “KEPCO Sustainable Finance Framework”, (2019), at:

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

⁴ Sustainalytics, “Second-Party Opinion, KEPCO”, (2019), at: <https://mstar-sustops-cdn-mainwebsite-s3.s3.amazonaws.com/docs/default-source/spos/kepco-green-bond-framework-second-party-opinion.pdf>

⁵ Sustainalytics, “Second-Party Opinion, KEPCO”, (2021), at:

https://home.kepco.co.kr/kepco/EN/ntcob/list.do?boardCd=BRD_000581&menuCd=EN030407

⁶ Sustainalytics, “Annual Review, KEPCO”, (January 2023), at: https://mstar-sustops-cdn-mainwebsite-s3.s3.amazonaws.com/docs/default-source/spos/korea-electric-power-corporation_annual_review_final.pdf

⁷ Sustainalytics, “Annual Review, KEPCO”, (December 2023), at: https://mstar-sustops-cdn-mainwebsite-s3.s3.amazonaws.com/docs/default-source/spos/korea-electric-power-corporation_annual-review_october-2023.pdf

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

Use of Proceeds Category	Eligibility Criteria	Key Performance Indicators
Renewable Energy - Solar photovoltaic power and wind power projects	Investment and expenditures to develop, construct, maintain or expand renewable energy generation, including only solar photovoltaic power and (on- and offshore) wind power	<ul style="list-style-type: none"> i. Renewable energy generated or purchased (MWh) ii. % of electricity consumption from renewable sources iii. Estimated avoided GHG emissions (tCO₂eq)
Renewable Energy - Increasing Stability in Power Supply	Investment and expenditure on the improvement of existing, or development /installation of new transmission infrastructure ⁸ to improve stability issues ⁹ that arise from abrupt increase in renewable energy generation volume	<ul style="list-style-type: none"> i. Number of power outages avoided ii. % Energy efficiency improved
Clean Transportation	Acquisition of electric vehicles (“EV”) and the investment dedicated to R&D, construction and installation of EV charging infrastructures	<ul style="list-style-type: none"> i. Number of EV purchases ii. Estimated % replacement of old diesel or petrol fleet to EV iii. Number of EV infrastructure constructed and location iv. Estimated avoided GHG emissions (tCO₂eq)
Access to essential services	Discount of electricity cost to lower income households ¹⁰ across Korea	Number of vulnerable households supplied with discounted power

Issuer’s Responsibility

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

Independence and Quality Control

Sustainalytics, a leading provider of ESG research and ratings, conducted the verification of the use of proceeds from KEPCO’s 2022 Green Bonds and 2023 Sustainability 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 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.

⁸ Grid infrastructure is subject to an average grid emissions factors below 100gCO₂e/kWh or at least 67% of newly enabled generation capacity is below this threshold, over a rolling five-year period

⁹ The activity enables an increase of the generation, use development and integration of renewable energy sources, including through sensors and measurement tools, communication and control, smart metering systems, interconnections or equipment to allow for exchange of renewable electricity

¹⁰ Low income households defined as: Low-income individuals refer to individuals with a monthly income below the national average as determined by the Korean Ministry of Health and Welfare (MOHW)’s classification

Conclusion

Based on the limited assurance procedures conducted,¹¹ nothing has come to Sustainalytics' attention that causes us to believe that, in all material respects, the reviewed projects do not conform with the use of proceeds criteria and reporting commitments in the Framework. KEPCO has disclosed to Sustainalytics that the proceeds from the 2022 Green Bonds were fully allocated as of March 2024 while 95.4% of the proceeds from the 2023 Sustainability Bond were allocated and KEPCO intends to allocate the remaining 4.6% of the proceeds by the end of 2024.

Detailed Findings

Table 2: Detailed Findings

Framework Requirements	Procedure Performed	Factual Findings	Error or Exceptions Identified
Use of Proceeds Criteria	Verification of the Nominated Projects to determine alignment with the use of proceeds criteria outlined in the Framework.	All projects reviewed complied with the use of proceeds criteria.	None
Reporting Criteria	Verification of the Nominated Projects to determine if impact was reported in line with the KPIs outlined in the Framework.	All projects reviewed reported on at least one KPI per use of proceeds category.	None

¹¹ Sustainalytics' limited assurance process includes reviewing documentation relating to details of projects, as provided by the issuing entity, which is responsible for providing accurate information. These may include descriptions of projects, estimated and realized costs, and reported impact. Sustainalytics has not conducted on-site visits to projects.

Appendix

Table 3: Allocation of proceeds from the 3-year USD 500 million Green Bond issued in June 2022

Use of Proceeds Category	Sub-category	Net Proceeds Allocated (USD million)
Renewable Energy – Solar Photovoltaic (PV) and Wind Power	Overseas Solar PV Projects	2
	Domestic Wind Power Projects	0.8
Renewable Energy – Increasing Stability in Power Supply	Connection Facility (Operation System)	6.5
	Connection Facility (Transmission & Substation Facilities)	177.4
	Connection Facility (Distribution)	313.3
Total		500

Table 4: Allocation of proceeds from the 5-year USD 300 million Green Bond issued in June 2022

Use of Proceeds Category	Sub-category	Net Proceeds Allocated (USD million)
Renewable Energy – Solar Photovoltaic (PV) and Wind Power	Overseas Solar PV Projects	84.8
	Domestic Wind Power Projects	15.6
Renewable Energy – Increasing Stability in Power Supply	Connection Facility (Transmission & Substation Facilities)	127.2
	Connection Facility (Distribution)	72.4
Total		300

Table 5: Allocation of proceeds from the 3.5-year USD 500 million Green Bond issued in September 2022

Use of Proceeds Category	Sub-category	Net Proceeds Allocated (USD million)
Renewable Energy – Increasing Stability in Power Supply	Connection Facility (Operation System)	6.5
	Connection Facility (Transmission & Substation Facilities)	170.7
	Connection Facility (Distribution)	322.8
Total		500

Table 6: Allocation of proceeds from the 5.5-year USD 300 million Green Bond issued in September 2022

Use of Proceeds Category	Sub-category	Net Proceeds Allocated (USD million)
Renewable Energy	Empirical Study & Technology Development for Renewable Energy	61.7
Renewable Energy – Increasing Stability in Power Supply	Connection Facility (Transmission & Substation Facilities)	133.1
	Connection Facility (Distribution)	72.4
Clean Transportation	Empirical Study & Technology Development for Clean Transportation	11.3
	Acquisition of Electric Vehicles	9.6
	Construction and Installation of EV Charging Infrastructure	11.9
Total		300

Table 7: Allocation of proceeds from the 3-year USD 1,000 million Sustainability Bond issued in July 2023

Use of Proceeds Category	Sub-category	Net Proceeds Allocated (USD million)
Renewable Energy – Increasing Stability in Power Supply	Connection Facility (Transmission & Substation Facilities)	47.8
	Connection Facility (Distribution)	73.9
Access to Essential Services- Electricity Bill Discount Program to Target Vulnerable Group	Disabled	231.8
	Basic Livelihood Security Recipient	365.9
	Low Income	37.9
	Social Welfare Facilities	196.4
Total		953.6
Unallocated Proceeds		46.4

Table 8: Reported Impact for Renewable Energy – Solar Photovoltaic (PV) and Wind Power

Projects	Renewable Energy Production (MWh)		GHG Emissions Avoided (tCO ₂ e)	
	Cumulative (2020 – 2023)	Annual (2023)	Cumulative (2020 – 2023)	Annual (2023)
Solar (Mexico)	147,365	84,179	57,114	32,625
Solar (Guam)	188,935	121,136	76,073	48,774
Total	336,300	205,315	133,187	81,399

Table 9: Reported Impact for Clean Transportation – Acquisition of Electric Vehicles

Year	Total Number of EV Purchase	Estimated Annual Mileage Per Vehicle (km)	Annually GHG Emissions Avoided (tCO ₂ e)
2022	100	14,454	260
2023	123	14,454	320
Total	223	-	580

Table 10: Reported Impact for Clean Transportation – Construction and Installation of EV Charging Infrastructure

Year	Total Number of Charging Infrastructure Constructed	Estimated Annual Mileage Per Vehicle (km)	Annually GHG Emissions Avoided (tCO ₂ e)
2022	817	27,587,143	4,966
2023	159	21,201,429	3,816
2024-Q1	71	3,831,429	690
Total	1,047	-	9,472

Table 11: Reported Impact for Renewable Energy – Increasing Stability in Power Supply

Year	Renewable Energy Connection Capacity (MW)	Annually GHG Emissions Avoided (tCO ₂ e)
2021	2,550	735,385
2022	2,099	1,878,588
2023	2,541	2,168,888
2024-Q1	1,045	878,977
Total	8,235	5,661,838

Table 12: Reported Impact for Access to Essential Services – Electricity Bill Discount Program

Target Vulnerable Group (number of households supported, '000)	2022	2023	2024-Q1
Disabled	691	680	677
Basic Livelihood Security Recipient	1,268	1,381	1,399
Low Income	202	198	192
Social Welfare Facilities	101	110	111
Total	2,271	2,369	2,379

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