

# Second-Party Opinion

## Korea South East Power Co.

### Sustainability Financing Framework

#### Evaluation Summary

Sustainalytics is of the opinion that the Korea South East Power Co. Sustainability Financing Framework is credible and impactful and aligns with the Sustainability Bond Guidelines 2018. This assessment is based on the following:



**USE OF PROCEEDS** The eligible categories for the use of proceeds (i) Renewable Energy, (ii) Energy Efficiency, (iii) Pollution Prevention and Control, (iv) Terrestrial and Aquatic Biodiversity Conservation, (v) Green Buildings, (vi) SME Financing and Microfinance, (vii) Employment Generation, (viii) Socioeconomic Advancement and Empowerment are aligned with those recognized by the Green Bond Principles and Social Bond Principles. Although the financing is not exclusively project-based, Sustainalytics considers the eligible green and social projects to have positive environmental and social impact and to advance various UN Sustainable Development Goals.



**PROJECT EVALUATION / SELECTION** KOEN will establish a Sustainable Financing Steering Committee (“SFSC”) with various cross-departmental representation which will review and approve Eligible Use of Proceeds. Sustainalytics views this process aligned with market standards.



**MANAGEMENT OF PROCEEDS** KOEN will establish a Sustainable Financing Register through which it will record and track all bond allocations. Pending full allocation, proceeds from the Sustainable Financing Transactions (“SFT”) will be held in accordance with the Group’s general liquidity management policies. This is in line with market practices.



**REPORTING** KOEN commits to disclose an annual allocation and impact reporting which will be disclosed on the company’s website, in its annual report, or in its sustainability reports. The allocation reporting will comprise the list and breakdown of Eligible Use of Proceeds along with the balance of unallocated proceeds. The impact reporting will be disclosed where possible and will comprise relevant impact indicators per each eligible project category. KOEN confirmed to Sustainalytics that both allocation and impact reporting will be issued annually. Sustainalytics considers the metrics and frequency of reporting to be aligned with market standards.

<b>Evaluation date</b>	13 March 2019
<b>Issuer Location</b>	Jinju, South Korea

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## Introduction

Korea South East Power Co. (“KOEN”) is a producer and seller of electricity based in South Korea. The company generates electricity through its portfolio of thermal, wind, solar, hydro and fuel cell power plants. As of December 2018, KOEN supplied 8.7% of the electricity transaction volume in Korea with a total capacity of 10,344.4 MW.<sup>1</sup> The company was established in 2001 and is a subsidiary of Korea Electric Power Corporation.

KOEN has developed the KOEN Sustainability Financing Framework (the “Framework”) under which it plans to issue multiple green, social or sustainability bonds and finance loans to finance or refinance, in whole or in part, existing and future projects that provide environmental or social benefits while supporting the KOEN’s strategy and vision. The Framework defines eligibility criteria in 8 areas:

1. Renewable energy
2. Pollution prevention and control
3. Terrestrial and aquatic biodiversity conservation
4. Green buildings
5. SME financing and microfinance
6. Employment generation
7. Socioeconomic advancement and empowerment

KOEN engaged Sustainalytics to review the KOEN Sustainability Financing Framework dated March 2019 and provide a second-party opinion on the Framework’s environmental and social credentials and its alignment with the Green Bond Principles 2018 (the “GBP”),<sup>2</sup> the Social Bond Principles 2018 (the “SBP”),<sup>3</sup> the Sustainability Bond Guidelines 2018 (the “SBG”),<sup>4</sup> as administered by the International Capital Market Association (the “ICMA”), and the Green Loan Principles (the “GLP”),<sup>5</sup> as administered by the Loan Market Association (the “LMA”). This Framework has been published in a separate document.<sup>6</sup>

As part of this engagement, Sustainalytics held conversations with various members of KOEN’s management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of KOEN’s sustainability bond. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics’ opinion of the KOEN Sustainability Financing Framework and should be read in conjunction with that Framework.

<sup>1</sup> 2018 Sustainability Report, KOEN: <https://www.koenergy.kr/kosep/hw/en/st/sthw01/main.do?menuCd=>

<sup>2</sup> ICMA’s Green Bond Principles 2018 available at: <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

<sup>3</sup> ICMA’s Social Bond Principles 2018 available at: <https://www.icmagroup.org/green-social-and-sustainability-bonds/social-bond-principles-sbp/>

<sup>4</sup> ICMA’s Sustainability Bond Guidelines 2018 available at: <https://www.icmagroup.org/green-social-and-sustainability-bonds/sustainability-bond-guidelines-sbg/>

<sup>5</sup> LMA and APLMA’s Green Loan Principles available at:

[https://www.icmagroup.org/assets/documents/Regulatory/GreenBonds/LMA\\_Green\\_Loan\\_Principles\\_Booklet-220318.pdf](https://www.icmagroup.org/assets/documents/Regulatory/GreenBonds/LMA_Green_Loan_Principles_Booklet-220318.pdf)

<sup>6</sup> The KOEN Sustainability Financing Framework is available on KOEN’s website at: [www.koenergy.kr/kosep/en/main.do](http://www.koenergy.kr/kosep/en/main.do)

## Sustainalytics' Opinion

### Section 1: Sustainalytics' Opinion on the Korea South East Power Co. Sustainability Finance Framework

#### Summary

Sustainalytics is of the opinion that the Sustainability Finance Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2018 and Social Bond Principles 2018. Sustainalytics highlights the following elements of the Korea South East Power Co. Sustainability Finance Framework:

#### Use of Proceeds:

- The use of proceeds categories of the Framework are recognized as environmentally and socially impactful by the Green Bond Principles, the Social Bond Principles, the Sustainability Bond Guidelines and the Green Loan Principles. Sustainalytics considers that KOEN's investments will support the company's transition towards a low-carbon renewable energy production.
- KOEN limits refinancing to projects/loans issued within 24 months prior to the date of the Sustainable Financing Transactions (green/social/ sustainability bonds/ loans) issuance, which is aligned with market practice.
- KOEN's social categories include the financial support to social enterprises, initiatives to create employment for youth, elderly and disabled, as well as financing of SMEs in districts with high unemployment and programmes directed at youth and providing employment for youths, disabled and/or long-term unemployed. Given the broad scope of the categories, Sustainalytics recommends KOEN to disclose to investors, prior to issuance, the projects to be financed under each of these categories. In addition, Sustainalytics recommends that KOEN set minimum working standards for SMEs being financed.
- KOEN's green buildings eligibility criteria are based on third-party certification standards such as LEED (Gold and above), BREEAM (Excellent and above) or national equivalent standards such as G-SEED 2 or above. Sustainalytics has conducted an evaluation of the certifications and considers these schemes to have a positive impact (see Appendix 1 for additional details on the certification schemes).
- The eligibility criteria for hydroelectric generation include only small hydroelectric facilities (under 25MW), thus reducing the potential environmental and social risks and regulatory challenges. In addition, Sustainalytics highlights KOEN's exclusion of investment in large hydro (above 25 MW) as well as fossil-fuel-related assets, production, distribution, operations, related research and development.
- Sustainalytics recognizes that the GBP, SBP, SBG and GLP prefer project-based lending and financing, and that there is, in general, less transparency with non-project-based lending. While this Framework includes project-based lending, it also considers the inclusion of non-project-based lending activities and expenditures related to SMEs.

#### Project Evaluation and Selection:

- KOEN's project selection process will be executed through a Sustainable Financing Steering Committee comprising representatives from various functional teams such as the Ethics & Culture Department, the Job Creation Department, the Finance Department, the Civil & Architecture Engineering Department, the New and Renewable Energy Department, the Small & Medium Enterprise Support Department and the Community Cooperation Department. The Sustainable Financing Steering Committee will annually review and revise the allocation of proceeds to Eligible Categories. Sustainalytics assesses this process to be in line with market practices.

#### Management of Proceeds:

KOEN confirmed that it will track and record all Sustainable Finance Transactions and allocations through a Sustainable Finance Register, while the proceeds will be earmarked and deposited in a general funding account. Pending full allocation, the unallocated proceeds will be invested in money market instruments with satisfactory credit ratings and market liquidity. Sustainalytics considers this process to be in line with market practices.

**Reporting:**

- KOEN has committed to disclose allocation and impact reporting, which will be disclosed annually on its website, annual reports or sustainability reports. The allocation report will be disclosed annually and will comprise a list of Eligible Use of Proceeds, a breakdown of the Eligible Use of Proceeds by geographical location, sector and others and the balance of unallocated proceeds. The impact reporting will be disclosed annually and will comprise relevant impact indicators per each green and social category such as: renewable energy generation (MWh)/capacity (MW), the reduction in energy usage (MWh), the amount of waste recycled (tons), the size of natural protection area, the number of SMEs supported, the number of jobs created, or the number of social enterprises supported. Sustainalytics views the scope and granularity of KOEN's allocation and impact reporting to be in line with current market practices.

**Alignment with Sustainability Bond Guidelines 2018**

Sustainalytics recognizes that the eligible categories in the KOEN Sustainability Finance Framework are not exclusively project based, i.e. KOEN may also allocate the net proceeds to finance lending and investment activities in companies. Sustainalytics recognizes that (i) the Green Bond Principles and Sustainability Bond Guidelines prefer project-based lending, and that (ii) in general, there is less transparency associated with reporting on non-project-based financing.

Sustainalytics recommends KOEN to establish well recognized criteria and impact metrics to ensure transparency on the financing of companies and impact of the bonds' proceeds. Nevertheless, Sustainalytics is of the opinion that the bond aligns with the Sustainability Bond Guidelines, 2018. For details please see Appendix 2.

**Section 2: Sustainability Performance of the Issuer****Contribution of Framework to KOEN's sustainability strategy and targets**

Despite that a large portion of KOEN's electricity supply is currently generated from fossil fuels, the company demonstrates its intention to expand renewable and clean electricity production as well as its programs for social impact through its sustainability strategy "Vision 2030". Within the strategy, the company commits to become a "Clean & Smart Energy Leader", including three material topics: "Lead the renewable energy business in the future", "Strengthen the competitiveness of eco-friendly power generation business" and "Improve the management system centering on social value creation".<sup>7</sup>

As part of Vision 2030, the company targets to increase the share of renewable energy to 25% of the total power generation by 2030, a significant growth given that the figure was 2% in 2017. Furthermore, the company aims to reduce 35% of its GHG emissions in 2030 compared to BAU.<sup>8</sup> To meet these targets, the company plans to implement large-scale projects of on-land and floating solar power, fuel cells and bio energy sources in the short-term (~2022) and engage in a 3GW offshore wind power project and create renewable energy complexes<sup>9</sup> in the mid-to long-term (2023~2030).<sup>10</sup>

In addition, KOEN's Vision 2030 also includes a social strategy focused on job creation, SME support and working culture. The company operates various supporting programs targeted to SMEs, such as providing funds, human resources, technologies, know-how, and platforms for collaboration. KOEN has reported the achievements of supporting programs they engaged, which include quantitative indicators such as increase of sales, employment, productivity and technology development of the supported companies.<sup>11</sup>

Sustainalytics is of the opinion that KOEN is well positioned to issue sustainability bonds and loans, and the use of proceeds described in the framework align with the company's strategic directions. Nevertheless,

<sup>7</sup> 2018 Sustainability Report, KOEN: <https://www.koenergy.kr/kosep/hw/en/st/sthw01/main.do?menuCd=EN050101>

<sup>8</sup> Business as Usual (BAU): Previous GHG emissions estimates

<sup>9</sup> KOEN's definition of renewable energy complexes includes onshore solar power & marine solar power, or marine wind power & large-scale renewable energy generation via onshore solar power.

<sup>10</sup> 2018 Sustainability Report, KOEN: <https://www.koenergy.kr/kosep/hw/en/st/sthw01/main.do?menuCd=EN050101>

<sup>11</sup> 2018 Sustainability Report, KOEN: <https://www.koenergy.kr/kosep/hw/en/st/sthw01/main.do?menuCd=EN050101>

Sustainalytics also encourages the company to continuously improve its sustainability performance and share of renewable energy.

### **Well positioned to address common environmental and social risks associated with the projects**

Sustainalytics views the eligible green and social investments to be aligned with those recognized by the SBG 2018 to have overall meaningful benefits. Nevertheless, Sustainalytics is aware that the projects can potentially have negative environmental and social outcomes, such as biodiversity and community relations risks related to large scale infrastructure projects, as well as workers health and safety risks or risks related to limited oversight of partner SMEs, social enterprises and other associate companies. Moreover, social projects can potentially increase inequality if not targeted at a particular population.

Sustainalytics highlights the following measures that KOEN has implemented in order to mitigate environmental and social risks related to the use of proceeds:

i) KOEN plans to finance projects exclusively located in South Korea. According to the South Korean legislation all energy producers are required to conduct environmental impact assessments covering (i) atmospheric topics (meteorology, air quality, odor, GHGs), (ii) water (water quality, marine environment, hydraulics & hydrology), (iii) land (land use, soil, topography & geology), (iv) natural (Flora & Fauna, Environmental property), (v) ambient (waste, noise & vibration, landscape, sanitation & health, electromagnetic wave, shading), and (vi) socioeconomic (population, resident, local industry). Sustainalytics highlights that South Korea's EIAs are regulated through an Environmental Impact Assessment Act which includes an 11 step EIA process concluding a final signoff from the relevant approval agency and the South Korean Ministry of Environment.<sup>12</sup>

ii) KOEN confirmed that a special safety supervisor is to be appointed, while a separate Tool Box Meeting (TMB) will be implemented as a precautionary system to check the safety and health of the personnel relative to potential large-scale infrastructure projects.

iii) KOEN reports on biodiversity risk management and that it actively integrates the potential impact on biodiversity and ecosystems into its business plan, based on ISO 14001.<sup>13</sup> KOEN confirmed that all electricity generating facilities are certified under the ISO 14001 standard, in addition to the EMS-0319 certification for environmental protection regarding the construction and project management of power plants and the production and supply of electric power. Sustainalytics views that the ISO 14001 standard along with the EMS-0319 standard provide additional assurance over the company's implementation of a systematic approach to secure environmental protection.

(iv) KOEN's social projects target defined segments of the population, such as youth, elderly or disabled people. However, eligible projects also include the financing of SMEs in regions with high unemployment or SMEs with programmes dedicated to increase employment of vulnerable groups. Sustainalytics recommends Koen to provide on issuance details of the projects and companies financed and to provide evidence that the businesses align with adequate working conditions.

Sustainalytics is of the opinion that KOEN is well positioned to mitigate environmental risk but recommends further disclosure on social projects financed as well as monitoring of working conditions at businesses financed.

### **Section 3: Impact of Use of Proceeds**

All eight use of proceeds categories are recognized as impactful by GBP. Sustainalytics has focused on three below where the impact is specifically relevant in local context.

<sup>12</sup> Environmental Impact Assessment System in South Korea available at: [https://www.unece.org/fileadmin/DAM/env/eia/documents/WG2.1\\_apr2012/EIA\\_system\\_ROK\\_moon\\_Geneva.pdf](https://www.unece.org/fileadmin/DAM/env/eia/documents/WG2.1_apr2012/EIA_system_ROK_moon_Geneva.pdf)

<sup>13</sup> Information retrieved from the KOEN Sustainability Management Report available at: <https://www.koenergy.kr/kosep/hw/en/st/sthw01/main.do?menuCd=EN050101>

### Expanding Renewable Energy Capacity

The Moon Jae-in administration inaugurated in May 2017, announced an energy policy shift, to gradually reduce dependence on nuclear and coal power, and accelerate the shift towards renewable energy and natural gas.<sup>14</sup> Reflecting the renewed policy, the 8<sup>th</sup> national electricity procurement plan published in December 2017, sets out a target to increase the share of renewable generation in the total electricity production from 7% in 2017 to 20% by 2030. The plan also targets to increase installed capacity of renewable energy from 11.3GW in 2017 to 58.5GW by 2030, including respective capacity additions of 30.8GW and 16.5GW from solar and wind.

Moreover, prior to the signing of the Paris Agreement, the country established its INDC (Intended Nationally Determined Contribution) in 2015, and committed to reduce 37% of the GHG emissions from BAU levels by 2030 across all economic sectors.<sup>15</sup> In July 2018, the government revealed the revised 2030 National GHG Reduction Roadmap, which provide policy direction to implement its mitigation actions to achieve the country's 536 million tonnes of CO<sub>2eq</sub> reduction target for 2030, and plans to further improve and revise before the NDC submission in 2020.<sup>16</sup>

However, even if the government would achieve its targets to expand its renewable energy generation and limit the nuclear power production to 23.9%, coal would still account for 36.1% of generated electricity in 2030,<sup>17</sup> indicating the need to foster renewable energy projects to decrease GHG emissions from energy production.

In this context, Sustainalytics holds a positive view that KOEN's financing of renewable energy projects will contribute to South Korea's renewable energy and climate goals.

### Supporting SMEs and Social Enterprises

KOEN intends to use part of the sustainability bond proceeds to support SMEs and social enterprises. Social enterprises are defined according to the Social Enterprise Promotion Act,<sup>18</sup> and described by Korea Social Enterprise Promotion Agency (KoSEA) as entities which carries out business activities while putting priority on the pursuit of social purposes. Social purpose includes providing job opportunities or social services to vulnerable social groups (low-income brackets, the elderly, the handicapped etc.), and promote development of local community and public interest.<sup>19</sup> The South Korean government has been fostering social enterprises since 1990s, with the aim to create good-quality, sustainable jobs, to address to the aggravated polarization since the economic crisis in 1997, and to respond to the demand for social services due to the advent of aging society. As of May 2018, a total of 1,937 companies were certified as social enterprises by the Minister of Employment & Labor.<sup>20</sup> Regarding the target population of social enterprises, in 2012, non-regular workers accounted for one-third of all workers within the country.<sup>21</sup> Furthermore, data from OECD showed that 45.7% of the country's elderly were in poverty (defined as earning 50% or less of median household income) in 2015, the highest rate among OECD countries.<sup>22</sup> Examples projects financed include the construction of solar power panel for electricity undersupplied homes, energy efficiency projects for disabled and vulnerable households and enhancement of energy environment of social welfare facilities (greenery areas and convenient facilities).

Moreover, KOEN intends to use part of the proceeds to support SMEs located in areas with high unemployment or dedicated programmes for employment of youth, elderly and disabled. According to the figures provided by the Korea National Statistical Office, SMEs accounted for 99.9% of firms and 87.9% of

<sup>14</sup> Energy Transition and Renewable Energy in Korea; published December 12, 2017; [https://www.unescap.org/sites/default/files/Session%201-6.%20Sanghoon%20Lee\\_GESI.pdf](https://www.unescap.org/sites/default/files/Session%201-6.%20Sanghoon%20Lee_GESI.pdf)

<sup>15</sup> Intended Nationally Determined Contribution, Republic of Korea;

<https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Republic%20of%20Korea%20First/INDC%20Submission%20by%20the%20Republic%20of%20Korea%20on%20June%202030.pdf>

<sup>16</sup> The strategy to achieve National Emission Targets 2030 to be renewed, Ministry of Environment:

<http://eng.me.go.kr/eng/web/board/read.do?pagerOffset=20&maxPageItems=10&maxIndexPages=10&searchKey=&searchValue=&menuId=21&orgCd=&boardId=902790&boardMasterId=522&boardCategoryId=&decorator=>

<sup>17</sup> South Korea finalizes energy plan to boost renewable power generation, Reuters: <https://af.reuters.com/article/commoditiesNews/idAFL4N10T26S>

<sup>18</sup> Social Enterprise Promotion Act, Ministry of Labor; <http://www.moleg.go.kr/english/korLawEng?pstSeq=47452&brdSeq=33>

<sup>19</sup> Korea Social Enterprise Promotion Agency; What is a Social Enterprise? Accessed February 2019:

[http://www.socialenterprise.or.kr/eng/info/What\\_is.do](http://www.socialenterprise.or.kr/eng/info/What_is.do)

<sup>20</sup> Korea Social Enterprise Promotion Agency Background/History accessed February 2019: <http://www.socialenterprise.or.kr/eng/info/act.do>

<sup>21</sup> OECD Economic Surveys KOREA; OECD; [https://www.oecd.org/eco/surveys/Overview\\_Korea\\_2014.pdf](https://www.oecd.org/eco/surveys/Overview_Korea_2014.pdf)

<sup>22</sup> Poverty rate, OECD; <https://data.oecd.org/inequality/poverty-rate.htm>

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employment in 2014,<sup>23</sup> indicating the important role of SMEs in South Korea's economy. However, a large dispersion gap is found in labor productivity between large corporations and SMEs. In 2013, the labor productivity as percent of that in large corporations was 28.8% for SMEs, being the second largest gap within the OECD countries in 2016. Moreover, in 2016, the dispersion gap of wage between large corporations and SMEs was the largest within the OECD countries,<sup>24</sup> indicating the need to foster SMEs and improve wages within SMEs. The South Korean government aims to foster SMEs by implementing a range of initiatives, such as measures to boost financing, developing business incubation centers, and providing tax and utility incentives. In 2017, the central government operated 288 programs to support SMEs, and allocated 3.0% of its total spending of that year.<sup>25</sup> Furthermore, the Ministry of SMEs and Start-ups (MSS) was established in 2017,<sup>26</sup> illustrating the importance of SMEs support within the governmental programmes.

Given the use of governmental definitions by KOEN as well as the importance of SMEs in the South Korean economy and the purpose of social enterprises, Sustainalytics is of the opinion that the use of proceeds will help advance the South Korean government's efforts towards empowering SMEs and socio-economic advancement. Nevertheless, Sustainalytics encourages KOEN to further define the type of SMEs or financed to ensure social impact of the use of proceeds.

### Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This sustainability bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Renewable Energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Pollution Prevention and Control	12. Sustainable Consumption and Production	12.2 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
Green Buildings	9. Industry, Innovation and Infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance to their respective capabilities.
Terrestrial and aquatic biodiversity conservation	15. Life on land	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.
SME financing and microfinance	8. Decent work and economic growth	8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
Socio economic advancement and empowerment	9. Industry innovation and infrastructure	9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.
Employment generation		

<sup>23</sup> Status of Korean SMEs, Ministry of SMEs and Start-ups: <https://www.mss.go.kr/site/eng/02/1020200000002016111504.jsp>

<sup>24</sup> Enhancing Dynamism in SMEs and Entrepreneurship in Korea, OECD:

[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP\(2018\)58&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP(2018)58&docLanguage=En)

<sup>25</sup> Enhancing Dynamism in SMEs and Entrepreneurship in Korea, OECD:

[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP\(2018\)58&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP(2018)58&docLanguage=En)

<sup>26</sup> History, Ministry of SMEs and Start-ups: <https://www.mss.go.kr/site/eng/01/1010300000002016111504.jsp>

## Conclusion

Korea South East Power (KOEN) developed the KOEN Sustainability Finance Framework to finance existing and future projects that provide environmental or social benefits while supporting the KOEN's strategy and vision. The use of proceed categories (i) Renewable energy, (ii) Pollution prevention and control, (iii) Terrestrial and aquatic biodiversity conservation, (iv) Green buildings, (v) SME financing and microfinance, (vi) Employment generation and (vii) Socioeconomic advancement and empowerment are aligned with those categories recognized by the GBP, SBP, GLP and SBG. KOEN includes non-project-based lending to SMEs in the eligible criteria. While Sustainalytics is of the opinion that the green use of proceeds contributes to KOEN's transition to lower the carbon footprint of its business activities, Sustainalytics recommends KOEN to disclose on issuance the social projects financed as well as control mechanisms to ensure adequate working conditions in the business financed.

KOEN's processes for evaluation and selection, management of proceeds and reporting are aligned with market practice.

Based on the above Sustainalytics is of the opinion that the KOEN Sustainable Finance Framework is aligned with the GBP 2018, GLP 2018, SBP 2018 and SBG 2018.

## Appendices

### Appendix 1: Green Buildings Certifications Comparison

	<b>BREEAM</b>	<b>LEED</b>	<b>G-SEED</b>
<b>Background</b>	BREEAM (Building Research Establishment Environmental Assessment Method) was first published by the Building Research Establishment (BRE) in 1990. Based in the UK. Used for new, refurbished and extension of existing buildings.	Leadership in Energy and Environmental Design (LEED) is a US Certification System for residential and commercial buildings used worldwide. LEED was developed by the non-profit U.S. Green Building Council (USGBC) and covers the design, construction, maintenance and operation of buildings.	G-SEED (Green Standard for Energy and Environmental Design) is a green building certification used in Korea. First implemented in 2002, and later expanded in 2016, G-SEED is administered by the Korean Government under the authority of the Green Building Act (2006).
<b>Certification levels</b>	Pass Good Very Good Excellent Outstanding	Certified Silver Gold Platinum	Green 4 Green 3 Green 2 Green 1
<b>Areas of Assessment: Environmental Project Management</b>	Management (Man) addresses various aspects: project management, deployment, minimal environmental disturbance worksite and stakeholder engagement.	Integrative process, which requires, from the beginning of the design process, the identification and creation of synergies between the various project stakeholders regarding the construction choices and the technical systems.	Not applicable
<b>Areas of Assessment: Environmental Performance of the Building</b>	Energy Land Use and Ecology Pollution Transport Materials Water Waste Health and Wellbeing Innovation	Energy and atmosphere Sustainable Sites Location and Transportation Materials and resources Water efficiency Indoor environmental quality Innovation in Design Regional Priority	Land Use & Transportation Energy & Environmental Pollution Materials & Resources Water Management Maintenance Ecology Indoor Environment Innovative Design
<b>Requirements</b>	Prerequisites depending on the levels of certification + Credits with associated points  This number of points is then weighted by item <sup>27</sup> and gives a BREEAM level of certification, which is based on the overall score obtained (expressed as a percentage). Majority of BREEAM issues are flexible, meaning that the client can choose which to comply with to build their BREEAM performance score.	Prerequisites (independent of level of certification) + Credits with associated points  These points are then added together to obtain the LEED level of certification  There are several different rating systems within LEED. Each rating system is designed to apply to a specific sector (e.g. New Construction, Major Renovation, Core and Shell Development, Schools-/Retail-	Prerequisites (independent of level of certification) + Credits with associated points  Individual credits are achieved in a number of categories. Category scores are then weighted to achieve an overall grade.

<sup>27</sup> BREEAM weighting: Management 12%, Health and wellbeing 15%, Energy 19%, Transport 8%, Water 6%, Materials 12.5%, Waste 7.5%, Land Use and ecology 10%, Pollution 10% and Innovation 10%. One point scored in the Energy item is therefore worth twice as much in the overall score as one point scored in the Pollution item

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	BREEAM has two stages/ audit reports: a 'BREEAM Design Stage' and a 'Post Construction Stage', with different assessment criteria.	/Healthcare New Construction and Major Renovations, Existing Buildings: Operation and Maintenance).	
<b>Performance display</b>			Not applicable
<b>Accreditation</b>	BREEAM International Assessor BREEAM AP BREEAM In Use Assessor	LEED AP BD+C LEED AP O+M	Certification Bodies, appointed by the Ministry of Environment (MOE) and the Ministry of Land, Infrastructure and Transportation (MLIT) review and certifies projects.
<b>Qualitative considerations</b>	Used in more than 70 countries: Good adaptation to the local normative context. Predominant environmental focus. BREEAM certification is less strict (less minimum thresholds) than HQE and LEED certifications.	Widely recognised internationally, and strong assurance of overall quality.	Widely used in Korea and aligned with government standards. Strong overall qualifications. Little international recognition.

## Appendix 2: Sustainability Bond / Sustainability Bond Programme - External Review Form

### Section 1. Basic Information

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**Issuer name:** Korea South East Power Co.

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**Sustainability Bond ISIN or Issuer Sustainability Bond Framework Name, if applicable:** KOEN Sustainability Finance Framework  
*[specify as appropriate]*

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**Review provider's name:** Sustainalytics

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**Completion date of this form:** March 2019

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**Publication date of review publication:** *[where appropriate, specify if it is an update and add reference to earlier relevant review]*

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### Section 2. Review overview

#### SCOPE OF REVIEW

## Korea South East Power Co. Sustainability Finance Framework

The following may be used or adapted, where appropriate, to summarize the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs and SBPs:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds        | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting                                    |

### ROLE(S) OF REVIEW PROVIDER

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 <sup>nd</sup> opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification   | <input type="checkbox"/> Rating        |
| <input type="checkbox"/> Other ( <i>please specify</i> ):                       |  |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

### EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (*if applicable*)

Please refer to Evaluation Summary above.

## Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

### 1. USE OF PROCEEDS

Overall comment on section (*if applicable*):

The use of proceeds categories of the Framework are recognized as environmentally and socially impactful by the Green Bond Principles, the Social Bond Principles, the Sustainability Bond Guidelines and the Green Loan Principles. Sustainalytics considers that KOEN's investments will support the company's transition towards a low-carbon renewable energy production.

KOEN limits refinancing to projects/ loans issued within 24 months prior to the date of Sustainable Financing Transactions (green/ social/ sustainability bond/ loan) issuance, which is aligned with market practice.

KOEN's social categories include the financial supports to social enterprises, initiatives to create employment for youth, elderly and disabled, as well as financing of SMEs in districts with high unemployment and programmes directed at youth and providing employment for youths, disabled and/or long-term unemployed. Given the broad scope of the categories, Sustainalytics recommends KOEN to disclose before issuance, projects financed under the categories to investors. In addition, Sustainalytics recommends KOEN to set minimum working standards for SMEs financed.

Sustainalytics recognizes that the GBP, SBP, SBG and GLP prefer project-based lending and financing, and there is, in general, less transparency with non-project-based lending. While this Framework includes project-based lending, it also considers the inclusion of non-project-based lending activities and expenditures related to SMEs.

## Korea South East Power Co. Sustainability Finance Framework

### Use of proceeds categories as per GBP:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Renewable energy   | <input type="checkbox"/> Energy efficiency   |
| <input checked="" type="checkbox"/> Pollution prevention and control   | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input checked="" type="checkbox"/> Terrestrial and aquatic biodiversity conservation  | <input type="checkbox"/> Clean transportation  |
| <input type="checkbox"/> Sustainable water and wastewater management   | <input type="checkbox"/> Climate change adaptation   |
| <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes                             | <input checked="" type="checkbox"/> Green buildings  |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | <input type="checkbox"/> Other ( <i>please specify</i> ):  |

If applicable please specify the environmental taxonomy, if other than GBPs:

### Use of proceeds categories as per SBP:

- |  |  |
|--|--|
| <input type="checkbox"/> Affordable basic infrastructure   | <input type="checkbox"/> Access to essential services  |
| <input type="checkbox"/> Affordable housing  | <input checked="" type="checkbox"/> Employment generation (through SME financing and microfinance) |
| <input type="checkbox"/> Food security   | <input checked="" type="checkbox"/> Socioeconomic advancement and empowerment                      |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBPs | <input type="checkbox"/> Other (please specify):   |

If applicable please specify the social taxonomy, if other than SBPs:

## 2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

KOEN's project selection process will be executed through a Sustainable Financing Steering Committee comprising representatives from various functional teams such as the Ethics & Culture Department, the Job Creation Department, the Finance Department, the Civil & Architecture Engineering Department, the New and Renewable Energy Department, the Small & Medium Enterprise Support Department and the Community Cooperation Department. The Sustainable Financing Steering Committee will annually review and revise the allocation of proceeds to Eligible Categories. Sustainalytics assesses this process to be in line with market practices.

### Evaluation and selection

## Korea South East Power Co. Sustainability Finance Framework

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Credentials on the issuer's social and green objectives                                 | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories    |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Sustainability Bond proceeds | <input type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input checked="" type="checkbox"/> Summary criteria for project evaluation and selection publicly available                | <input type="checkbox"/> Other ( <i>please specify</i> ):  |

### Information on Responsibilities and Accountability

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other ( <i>please specify</i> ):  |  |

### 3. MANAGEMENT OF PROCEEDS

Overall comment on section (*if applicable*):

KOEN confirmed that it will track and record all Sustainable Finance Transactions and allocations through a Sustainable Finance Register, while the proceeds will be earmarked and deposited in a general funding account. Pending full allocation, the unallocated proceeds will be invested in money market instruments with satisfactory credit ratings and market liquidity. Sustainalytics considers this process to be in line with market practices.

#### Tracking of proceeds:

- |   |
|---|
| <input checked="" type="checkbox"/> Sustainability Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other ( <i>please specify</i> ):   |

#### Additional disclosure:

- |  |   |
|--|---|
| <input type="checkbox"/> Allocations to future investments only                  | <input checked="" type="checkbox"/> Allocations to both existing and future investments |
| <input type="checkbox"/> Allocation to individual disbursements                  | <input type="checkbox"/> Allocation to a portfolio of disbursements                     |
| <input type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other ( <i>please specify</i> ):                               |

### 4. REPORTING

Overall comment on section (*if applicable*):

## Korea South East Power Co. Sustainability Finance Framework

KOEN committed to disclose an allocation and impact reporting, which will be disclosed annually on its website, annual reports or sustainability reports. The (i) allocation report will be disclosed annually and will comprise a list of Eligible Use of Proceeds, a breakdown of the Eligible Use of Proceeds by geographical location, sector and others and the balance of unallocated proceeds. The (ii) impact reporting will be disclosed annually and will comprise relevant impact indicators per each green and social category such as: renewable energy generation (MWh)/capacity (MW), the reduction in energy usage (MWh), the amount of waste recycled (tons), the size of natural protection area, the number of SMEs supported, the number of jobs created, or the number of social enterprises supported. Sustainalytics views the scope and granularity of KOEN's allocation and impact reporting to be in line with current market practices.

### Use of proceeds reporting:

- |  |  |
|--|--|
| <input type="checkbox"/> Project-by-project            | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other ( <i>please specify</i> ):        |

### *Information reported:*

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Allocated amounts     | <input type="checkbox"/> Sustainability Bond financed share of total investment |
| <input type="checkbox"/> Other ( <i>please specify</i> ): |   |

### *Frequency:*

- |   |                                      |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual                | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other ( <i>please specify</i> ): |                                      |

### Impact reporting:

- |  |  |
|--|--|
| <input type="checkbox"/> Project-by-project            | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other ( <i>please specify</i> ):        |

### Frequency:

- |   |                                      |
|---|--------------------------------------|
| <input checked="" type="checkbox"/> Annual                | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other ( <i>please specify</i> ): |                                      |

### Information reported (expected or ex-post):

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> GHG Emissions / Savings | <input type="checkbox"/> Energy Savings  |
| <input type="checkbox"/> Decrease in water use              | <input type="checkbox"/> Number of beneficiaries   |
| <input type="checkbox"/> Target populations                 | <input checked="" type="checkbox"/> Other ESG indicators ( <i>please specify</i> ): Amount of waste recycled (tons), Size of natural protection area, Number of SMEs supported, Number of start-up SMEs subsidized, Number of jobs created, Number of Social Enterprises supported/contributed |

## Korea South East Power Co. Sustainability Finance Framework

### Means of Disclosure

- |  |   |
|--|---|
| <input type="checkbox"/> Information published in financial report   | <input type="checkbox"/> Information published in sustainability report |
| <input type="checkbox"/> Information published in ad hoc documents   | <input type="checkbox"/> Other (please specify):                        |
| <input checked="" type="checkbox"/> Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review): Annual or Sustainability Report |   |

Where appropriate, please specify name and date of publication in the useful links section.

**USEFUL LINKS** (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

KOEN website: <https://www.koenergy.kr/kosep/en/main.do>

### SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

#### Type(s) of Review provided:

- |  |  |
|--|--|
| <input type="checkbox"/> Consultancy (incl. 2 <sup>nd</sup> opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification / Audit                        | <input type="checkbox"/> Rating        |
| <input type="checkbox"/> Other ( <i>please specify</i> ):            |  |

**Review provider(s):**

**Date of publication:**

### ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE GBP AND THE SBP

- i. **Consultant Review:** An issuer can seek advice from consultants and/or institutions with recognized expertise in environmental and social sustainability or other aspects of the issuance of a Sustainability Bond, such as the establishment/review of an issuer's Sustainability Bond framework. "Second Party Opinions" may fall into this category.
- ii. **Verification:** An issuer can have its Sustainability Bond, associated Sustainability Bond framework, or underlying assets independently verified by qualified parties, such as auditors. In contrast to certification, verification may focus on alignment with internal standards or claims made by the issuer. Evaluation of the environmentally and socially sustainable features of underlying assets may be termed verification and may reference external criteria.
- iii. **Certification:** An issuer can have its Sustainability Bond or associated Sustainability Bond framework or Use of Proceeds certified against an external green and social assessment standard. An assessment standard defines criteria, and alignment with such criteria is tested by qualified third parties / certifiers.
- iv. **Rating:** An issuer can have its Sustainability Bond or associated Sustainability Bond framework rated by qualified third parties, such as specialized research providers or rating agencies. Sustainability Bond ratings are separate from an issuer's ESG rating as they typically apply to individual securities or Sustainability Bond frameworks / programmes.

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Sustainalytics is a leading independent ESG and corporate governance research, ratings and analytics firm that support investors around the world with the development and implementation of responsible investment strategies. With 13 offices globally, the firm partners with institutional investors who integrate ESG information and assessments into their investment processes. Spanning 30 countries, the world's leading issuers, from multinational corporations to financial institutions to governments, turn to Sustainalytics for second-party opinions on green and sustainable bond frameworks. Sustainalytics has been certified by the Climate Bonds Standard Board as a verifier organization and supports various stakeholders in the development and verification of their frameworks. Global Capital named Sustainalytics the "Most Impressive Second Party Opinion Provider in 2017". In 2018, the firm was recognized as the "Largest External Reviewer" by the Climate Bonds Initiative as well as Environmental Finance. In addition, Sustainalytics received a Special Mention Sustainable Finance Award in 2018 from The Research Institute for Environmental Finance Japan for its contribution to the growth of the Japanese Green Bond Market.

For more information, visit [www.sustainalytics.com](http://www.sustainalytics.com)

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