

# Second-Party Opinion

## Korea Midland Power Green Bond

### Evaluation Summary

Sustainalytics is of the opinion that the Korea Midland Power ("KOMIPO") Green Bond Framework is credible and impactful, and aligns with the four core components of the Green Bond Principles 2018. This assessment is based on the following:



**USE OF PROCEEDS** The three green categories for eligible use of proceeds – (i) Renewable Energy, (ii) Low Carbon Transport, and (iii) Green Buildings - are aligned with those recognized by the Green Bond Principles 2018. Sustainalytics considers the eligible green project categories to have positive environmental impact and to advance the UN Sustainable Development Goals, specifically 7 and 11.



**PROJECT EVALUATION / SELECTION** A dedicated Green Bond Working Group will oversee the internal process in evaluating and selecting projects. The cross-functional working group will consist of senior representatives from various departments, including the CEO, and the Climate Change & Environment Team. This is in line with market practice.



**MANAGEMENT OF PROCEEDS** KOMIPO will track the net use of proceeds through a Green Bond Register. The proceeds of transaction will be deposited in the general funding accounts and earmarked for allocation to eligible projects. Pending allocation from proceeds will be held in accordance with KOMIPO's general liquidity management policy and can be invested in money market instruments, cash, cash equivalents, investment grade securities or other marketable securities and short-term instruments with satisfactory credit ratings and market liquidity. This is in line with market practice.



**REPORTING** KOMIPO intends to provide a Green Bond Progress Report published within its Investor Relations website within one year of issuance, and on an annual basis until the proceeds are fully allocated. The allocation reporting will include the aggregate amount allocated to eligible projects, as well as its proportion of total disbursements, and impact reporting will include relevant metrics. Sustainalytics views KOMIPO's allocation and impact reporting as aligned with market practice.

|                        |               |
|------------------------|---------------|
| <b>Evaluation date</b> | December 2018 |
| <b>Issuer Location</b> | Seoul, Korea  |

### Report Sections

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## Introduction

Korea Midland Power Co., Ltd. (“KOMIPO”, the “Issuer”) was founded in 2001 and is wholly owned by Korea Electric Power Co. (“KEPCO”, or “the Group”). KOMIPO has approximately 8% of the total electricity generation capacity in Korea, as of the end of September 2018,<sup>1</sup> and six generation facility sites in operation, including Boryeong Power Generation Site Division and Seoul Construction Site Division.<sup>2</sup> It also engages in the power plant construction, operation, as well as maintenance activities.<sup>3</sup> The company is headquartered in Boryeong, South Korea. KOMIPO’s parent company, Korea Electric Power Co., is an integrated electric utility company in which the government of South Korea holds a controlling stake. Under the supervision of the Ministry of Trade, Industry, and Energy, the Group transmits and distributes substantially all South Korea’s electricity. The Group produces a substantial power through its portfolio of nuclear, thermal, hydro, internal combustion, solar, wind, fuel cell, and biogas power plants that are located throughout the country.<sup>4</sup>

KOMIPO has developed the Green Bond Framework (the “Framework”) under which it will issue green bond(s) and use the proceeds to refinance or finance, in whole or in part, existing or new eligible projects that provide clear environmental benefits. The Framework defines eligibility criteria in the following three areas:

1. Renewable Energy
2. Low Carbon Transport
3. Green Buildings

KOMIPO engaged Sustainalytics to review the Green Bond Framework and provide a second-party opinion on the Framework’s environmental credentials, as well as the alignment of the Framework with the Green Bond Principles 2018 (the “GBP 2018”),<sup>5</sup> as administered by the International Capital Market Association (the “ICMA”).<sup>6</sup> This Framework has been published in a separate document.<sup>7</sup>

As part of this engagement, Sustainalytics held conversations with various members of KOMIPO’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 KOMIPO’s green bonds. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics’ opinion of the KOMIPO Green Bond Framework and should be read in conjunction with that Framework.

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<sup>1</sup> KOMIPO Green Bond Framework

<sup>2</sup> Korea Midland Power, Overview: <https://www.komipo.co.kr/eng/content/186/main.do?mnCd=EN010101>

<sup>3</sup> Bloomberg, Korea Midland Power: <https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=5482403>

<sup>4</sup> Bloomberg, Korea Electric Power Corporation: <https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=380884>

<sup>5</sup> Sustainability Bonds are aligned with the four core components of both the Green Bond Principles and Social Bond Principles, with the former being especially relevant to underlying Green Projects and the latter to underlying Social Projects.

<sup>6</sup> ICMA’s Green Bond Principles 2018 <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

<sup>7</sup> KOMIPO Green Bond Framework: [https://www.komipo.co.kr/eng/board/BRD\\_000092/boardMain.do?mnCd=EN030204&pageSize=10](https://www.komipo.co.kr/eng/board/BRD_000092/boardMain.do?mnCd=EN030204&pageSize=10)

## Sustainalytics' Opinion

### Section 1: Sustainalytics' Opinion on the KOMIPO Green Bond Framework

#### Summary

Sustainalytics is of the opinion that the KOMIPO Green Bond Framework is credible and impactful, and aligns with the four core components of the GBP 2018. Sustainalytics highlights the following elements of KOMIPO Green Bond Framework:

- Use of Proceeds:
  - The three use of proceeds categories are recognized as impactful by the GBP 2018. The eligible projects in these categories will provide meaningful environmental contributions in terms of improved access to renewable energy, low carbon transport, and green buildings. KOMIPO committed to only refinance existing eligible projects within 36 months prior to the date of the issuance of the Green Bond.
  - KOMIPO will promote the development of renewable energy projects in consideration of registering under the Clean Development Mechanism (CDM) of the Kyoto Protocol,<sup>8</sup> including wind, solar and small-hydro power (<25 MW). Sustainalytics views positively the CDM requirements and methodology, including the selection process, project cycle, approval and validation, which strengthen the potential environmental impacts of the registered renewable projects and steer international emissions reduction goals through carbon credits.
  - The solar projects will be stand-alone generation systems on the Boryeong Plant site. KOMIPO has confirmed to Sustainalytics that the development of solar projects will not be related to their existing or new coal generation process and the generated solar power will be sold directly to Korea Electric Power Co.
  - Sustainalytics notes that the fuel cell systems may be powered by hydrogen derived from natural gas, however, it produces energy with near-zero GHG emissions. Furthermore, as renewable energy sources (solar, wind, and biomass from sustainable feedstock) are economically scaled, the potential for increasing use of these alternative resources exists for hydrogen production. Sustainalytics views positively this Use of Proceeds sub-category as hydrogen-based fuel cell technologies support the transition to a low-carbon energy, as well as encourages KOMIPO to consider the lifecycle impact of sourced fuels for fuel cell projects.
  - KOMIPO has confirmed that the electricity produced from the Incheon fuel cell power plant, that will be traded on Korea Power Exchanges or be supplied to heating systems, will not be linked to fossil fuel generation facilities. Sustainalytics believes that this exclusion strengthens the Framework.
  - KOMIPO's Wonju combined heat power plant utilizes biofuel power generated from solid recovered fuel<sup>9</sup> which expands the recycling of waste resources and reduces GHG emissions as an alternate to fossil fuels. Sustainalytics views positively the waste-to-energy conversion and recommends further reduction of the combustion of fossil-fuel derived waste in order to mitigate the negative impact of resulting carbon emissions.
  - KOMIPO's green buildings eligibility criteria are based on third-party certification standards such as LEED Gold or above, BREEAM Excellent or above, G-SEED Green 2 or above, or other equivalent national standards. Sustainalytics has conducted an evaluation of the certifications and views KOMIPO's focus on the highest levels of certification as industry best practice (refer to Appendix 1 for additional information on the certification schemes).
  - The exclusionary criteria consider the following exclusions: nuclear energy, weapons, industries with high likelihood of child labor and violation of human rights, large-scale hydropower (>25 MW), technology and equipment for large-scale hydro projects, transmission infrastructure and systems with 25% or more fossil-fuel generated electricity, and fossil fuel electricity production and energy efficiency improvement. Sustainalytics is of the opinion that these exclusions strengthen the Framework.

<sup>8</sup> The CDM, as defined in article 12 of the Kyoto Protocol, allows a country with an emission-reduction commitment under the Kyoto Protocol to implement an emission-reduction project in developing countries. These projects are then eligible to earn Certified Emission Reduction (CER) credits, each of which is equivalent to one tonne of carbon dioxide. These CER credits are then traded in carbon markets.

<sup>9</sup> Korea Midland Power, Blog: <http://blog.komipo.co.kr/485>

- **Project Evaluation and Selection:**
  - KOMIPO's project selection process involves initial project identification by the Green Bond Working Group (GBWG) consisting of various senior representatives, including the CEO, Engineering and Safety Division, Finance Team, Power Generation Department, as well as Climate Change & Environment Team. Sustainalytics considers that the collaboration between relevant business units is likely to strengthen the implementation of the Framework and is in line with market practice.
- **Management of Proceeds:**
  - KOMIPO will track the net use of proceeds through a Green Bond Register. The proceeds of the transaction will be deposited in general funding accounts and earmarked for allocation to eligible projects.
  - The unallocated proceeds will be held in accordance with KOMIPO's general liquidity management policy and can be invested in money market instruments, cash, cash equivalents, investment grade securities or other marketable securities and short-term instruments with satisfactory credit ratings and market liquidity. KOMIPO's process with respect to the management of proceeds is robust and in line with market practice.
- **Reporting:**
  - KOMIPO intends to publish a Green Bond Progress Report on its Investor Relations website within one year of issuance, and on an annual basis, thereafter, providing allocation and impact reporting in line with market practice.
  - The allocation reporting will include relevant transaction data such as the aggregate amount allocated to eligible projects, its proportion of total disbursements, and the breakdown of eligible use of proceeds by geographical location as well as the eligible category.
  - The impact reporting may include environmental indicators such as renewable energy generation or capacity, annual GHG emissions avoided, annual renewable portfolio standards (RPS) purchased, energy saved, and number of electric and/or fuel cell vehicles and charging stations built.

#### Alignment with the GBP 2018

Sustainalytics has determined that the KOMIPO's Green Bond Framework aligns with the four core components of the GBP 2018. For detailed information please refer to Appendix 2: Green Bond/Green Bond Programme External Review Form.

## Section 2: Sustainability Performance of the Issuer

### Contribution of the Green Bond Framework to Korea Midland Power's sustainability strategy

Sustainalytics is of the opinion that KOMIPO articulates a strong commitment to a comprehensive approach to sustainability, including renewable energy development, energy efficiency and safety. KOMIPO has demonstrated business ethics as well as a commitment to enhance energy security and mitigate climate change in its Sustainability Report 2015 through the following efforts:<sup>10</sup>

- KOMIPO's core mission is to provide a stable supply of electricity. Its Sustainable Management Strategy states four goals (and 12 strategic initiatives), including a focus on technological innovation, the operations of eco-friendly power plants & safe workplace, the implementation of Renewable Portfolio Standard (RPS), as well as securing the carbon emission rights for the clean development mechanism (CDM).
- KOMIPO's Vision 2025 Management Strategy System discusses the following:
  - The Strategic Goals and underlying Strategic KPIs which focus on (i) enhancing the facility operations efficiency, (ii) supporting the green energy projects, and (iii) promoting the stakeholder value and social responsibility.
  - A 'Vision Goal' of pursuing DNV's International Safety Rating System-Culture (ISRS-C)<sup>11</sup> Index of 9.0, which is within the highest level for achieving results in safety.
- KOMIPO has set a goal of reducing the fine dusts emissions of approximately 74% by 2025 below 2015 levels under its Fine Dust Reduction Policy,<sup>12</sup> and a mid- to long-term strategy to expand renewable

<sup>10</sup> Korea Midland Power, Sustainability Report 2015: <https://www.komipo.co.kr/eng/content/248/main.do?mnCd=EN040101>

<sup>11</sup> DNV-GL, International Safety Rating System: <https://www.dnvgl.com/services/isrs-for-the-health-of-your-business-2458>

<sup>12</sup> Korea Midland Power, Environment Protection Activities: <https://www.komipo.co.kr/eng/content/250/main.do?mnCd=EN040201>

facilities and install CO<sub>2</sub> capture technology with a plan to reduce GHG emissions by 18% by 2020 below 2015 levels.

- KOMIPO received the highest grade ('AAA') in the Korea Business Ethics Index Sustainability Management (KoBEX SM) hosted by the Ministry of Trade, Industry and Energy. Additionally, KOMIPO won the President's Prize at the 2014 Korea Green Management Awards, as well as achieved 'Excellent Grade' in the Anti-Corruption Policy Assessment of Public Organizations in Korea in 2016 for two consecutive years.<sup>13</sup>

Sustainalytics is of the opinion that KOMIPO's sustainability strategy and actions demonstrate the importance it places on achieving positive environmental and social impacts. Sustainalytics also believes that KOMIPO's Framework is aligned with its overall sustainability efforts and can support Korea's energy security and sustainable development initiatives.

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

While Sustainalytics recognizes that the Use of Proceeds from KOMIPO's Framework will be directed towards eligible projects that are recognized by the GBP 2018 to have positive environmental impact, Sustainalytics is aware that such projects could also lead to negative environmental and social outcomes. Some key environmental and social risks associated with the eligible projects include a lack of pollution control in construction and development projects, an increased exposure of local communities to adverse effects, and biodiversity loss.

Sustainalytics is of the opinion that KOMIPO can mitigate such risks through the following systems and processes:

- KOMIPO's Strategic Goals includes 'sophisticating the enterprise-wide risk management system' as well as 'safety management system'. In the past, KOMIPO has received recognitions for operating its Boryeong Thermal Unit for over 5,000 days with zero accidents or failures.
- KOMIPO's Sustainability Management Committee under the Board of Directors consists of C-level executives, including the CEO, with subcommittees for expertise-oriented decision-making. Additionally, KOMIPO's Audit Committee and five Subcommittees under the Board of Directors ensure responsible management system.
- In 2014, KOMIPO established the Code of Conduct for suppliers to provide strongly recommended ethical, social, and environmental standards. KOMIPO also laid out its implementation plan for the UN Global Compact (UNGC) to continue complying with its ten principles.
- KOMIPO conducted a five-step IPS Materiality Test Model<sup>TM</sup> and selected nine core material issues in alignment with the GRI G4 Guidelines. KOMIPO also created a Green Management Policy to promote innovation and eco-friendly management in power supply for the national development.
- In 2015, KOMIPO established a Standard Manual on Conflict Management to understand, prevent, and manage conflicts with relevant stakeholders regarding the construction and operation of power plants. The Conflict Resolution Council was set up at each worksite with internal and external stakeholders, including the Ministry of Trade, Industry and Energy's public officials.
- KOMIPO acquired ISO 14001 certification (Environmental Management System) in 2004 and has since been conducting an annual environmental audit procedure. KOMIPO also holds the Ministry of Environment's Green Enterprise Designation for its various power plants division as a result of actively striving to minimize environmental pollution with the participation of all employees.<sup>12</sup>

Due to the stated management of environmental, social, ethical, and safety considerations related to the development and operation of power plants, Sustainalytics believes that KOMIPO has sufficient measures to identify, manage and mitigate environmental and social risks commonly associated with the Use of Proceeds.

<sup>13</sup> Korea Midland Power, Brochure 2016: [http://www.industrykorea.net/KOMIPO/KOMIPO\\_Brochure\\_2016.pdf](http://www.industrykorea.net/KOMIPO/KOMIPO_Brochure_2016.pdf)

## Section 3: Impact of Use of Proceeds

### Environmental impacts

The use of proceeds from KOMIPO's green bonds will be used for financing or refinancing in the following three categories:

1. Renewable Energy
2. Low Carbon Transport
3. Green Buildings

All three green categories are recognized as impactful by the GBP 2018.

### Contribution of renewable energy to South Korea's transition to a low-carbon economy

Renewable energy accounted for approximately 6.7% of South Korea's energy generation mix in 2017, and the country has set a national target to increase the share of renewable energy to 20% by 2030 with the growth mainly coming from solar and wind power, according to the government's 8th Basic Plan for Long-term Electricity Supply and Demand.<sup>14</sup> The Green Energy Strategy Institute, a research wing of the Korean Society for New and Renewable Energy,<sup>15</sup> estimates that South Korea's renewable energy share target is ambitious given the country's limited total solar and wind power of 5.7 GW and 1.2 GW, respectively.<sup>16</sup>

Sustainalytics considers KOMIPO's investment in renewable energy generation as instrumental to its contribution to South Korea's renewable energy targets, and the related decarbonization targets under the Paris Climate Agreement which mandate that the country reduce its GHG emissions to 37% below business as usual emissions by 2030.<sup>17</sup>

Separately, South Korea's Ministry of Environment calculated that the coal-based electricity production is the third most intensive source of fine particulate air pollution in South Korea, contributing to 23 premature deaths from outdoor air pollution per 100,000 people<sup>18</sup>. As a result, South Korea's government will seek to decrease the share of coal-based power generation and rebalance it with renewable energy sources through its next nationwide power demand-supply plan.<sup>18</sup> Sustainalytics is of the opinion that KOMIPO's renewable energy projects will positively contribute by reducing the company's reliance on coal-fired electricity production, while having an indirect positive impact on the country's air quality along with the complementing Fine Dust Reduction Policy set by KOMIPO for existing coal-fired facilities.

Sustainalytics believes that KOMIPO is well-positioned to make an impact through its use of proceeds categories and that KOMIPO's Green Bonds will promote the adoption of climate change initiatives and support a shift towards a low-carbon economy.

### Alignment with/contribution to SDGs

The UN Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. KOMIPO's green bonds advance 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. |

<sup>14</sup> Korea's Ministry of Trade, Industry and Energy, 8th Basic Plan for Electricity Supply and Demand:

[http://english.motie.go.kr/en/tp/energy/bbs/bbsView.do?bbs\\_seq\\_n=605&bbs\\_cd\\_n=2&view\\_type\\_v=TOPIC&currentPage=1&search\\_key\\_n=&search\\_val\\_v=&cate\\_n=3](http://english.motie.go.kr/en/tp/energy/bbs/bbsView.do?bbs_seq_n=605&bbs_cd_n=2&view_type_v=TOPIC&currentPage=1&search_key_n=&search_val_v=&cate_n=3)

<sup>15</sup> Korean Society for New and Renewable Energy, New and Renewable Energy: <http://journalsnre.com/>

<sup>16</sup> IRENA, Renewable Capacity Statistics 2018: <http://www.irena.org/publications/2018/Mar/Renewable-Capacity-Statistics-2018>

<sup>17</sup> South Korea's Paris Climate Agreement targets: <https://climateactiontracker.org/countries/south-korea/pledges-and-targets/>

<sup>18</sup> Document retrieved from the UNESCAP, Air Quality Measures:

[http://www.unescap.org/sites/default/files/Session%201.1.%20Yongsok%20Yoo\\_ROK.pdf](http://www.unescap.org/sites/default/files/Session%201.1.%20Yongsok%20Yoo_ROK.pdf)

|                      |  |  |
|----------------------|--|--|
| Low Carbon Transport | 11. Sustainable Cities and Communities | 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons. |
| Green Buildings      |  | 11.B By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, and resilience to disasters.  |

## Conclusion

KOMIPO has developed its Green Bond Framework to finance, or refinance, a broad range of projects that will deliver positive environmental outcomes. KOMIPO has described a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for the allocation and impact reporting.

Sustainalytics believes that the projects to be funded green bonds are aligned with KOMIPO's overall sustainability strategy and will also contribute to the advancement of the UN Sustainable Development Goals, specifically 7, and 11. Additionally, Sustainalytics believes that KOMIPO has sufficient measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the use of proceeds.

Based on the above, Sustainalytics is confident that KOMIPO is well-positioned to issue green bonds, and that the KOMIPO Green Bond Framework is robust, transparent, and in alignment with the GBP 2018.





## Appendices

### Appendix 1: Comparison of Green Building Certification Schemes

|   | LEED   | BREEAM  | G-SEED  |
|---|--|---|---|
| <b>Background</b>   | 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.   | 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.  | 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>   | Certified<br>Silver<br>Gold<br>Platinum  | Pass<br>Good<br>Very Good<br>Excellent<br>Outstanding   | Green 4<br>Green 3<br>Green 2<br>Green 1  |
| <b>Areas of Assessment: Environmental Project Management</b>          | 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.   | Management (Man) addresses various aspects: project management, deployment, minimal environmental disturbance worksite and stakeholder engagement.  |   |
| <b>Areas of Assessment: Environmental Performance of the Building</b> | Energy and atmosphere<br>Sustainable Sites<br>Location and Transportation<br>Materials and resources<br>Water efficiency<br>Indoor environmental quality<br>Innovation in Design<br>Regional Priority  | Energy<br>Land Use and Ecology<br>Pollution<br>Transport<br>Materials<br>Water<br>Waste<br>Health and Wellbeing<br>Innovation   | Land Use & Transportation<br>Energy & Environmental<br>Pollution<br>Materials & Resources<br>Water Management<br>Maintenance<br>Ecology<br>Indoor Environment<br>Innovative Design  |
| <b>Requirements</b>   | Prerequisites (independent of level of certification) + Credits with associated points<br><br>These points are then added together to obtain the LEED level of certification<br><br>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-/Healthcare New | Prerequisites depending on the levels of certification + Credits with associated points<br><br>This number of points is then weighted by item <sup>19</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<br><br>Individual credits are achieved in a number of categories. Category scores are then weighted to achieve an overall grade.   |

<sup>19</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



|                                   |   |  |  |
|-----------------------------------|---|--|--|
|                                   | Construction and Major Renovations, Existing Buildings: Operation and Maintenance). | BREEAM has two stages/ audit reports: a 'BREEAM Design Stage' and a 'Post Construction Stage', with different assessment criteria.   |  |
| <b>Performance display</b>        |    |    |  |
| <b>Accreditation</b>              | LEED AP BD+C<br>LEED AP O+M   | BREEAM International Assessor BREEAM AP<br>BREEAM In Use Assessor  | 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> | Widely recognised internationally, and strong assurance of overall quality.         | 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 used in Korea and aligned with government standards. Strong overall qualifications. Little international recognition.   |

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

### Section 1. Basic Information

|   |  |
|---|--|
| Issuer name:  | Korea Midland Power Co., Ltd. ("KOMIPO") |
| Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: <i>[specify as appropriate]</i>   | Korea Midland Power Green Bond Framework |
| Review provider's name:   | Sustainalytics                           |
| Completion date of this form:   | December 12, 2018                        |
| Publication date of review publication: <i>[where appropriate, specify if it is an update and add reference to earlier relevant review]</i> |  |

### Section 2. Review overview

#### SCOPE OF REVIEW

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

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

- |  |  |
|--|--|
| <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 three green categories for eligible use of proceeds – (i) Renewable Energy, (ii) Low Carbon Transport, and (iii) Green Buildings - are aligned with those recognized by the GBP 2018. Sustainalytics considers the eligible green project categories to have positive environmental impact and to advance the UN Sustainable Development Goals, specifically 7 & 11.

#### Use of proceeds categories as per GBP:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Renewable energy   | <input type="checkbox"/> Energy efficiency   |
| <input type="checkbox"/> Pollution prevention and control  | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation   | <input checked="" 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:

### 2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

A dedicated Green Bond Working Group will oversee the internal process in evaluating and selecting projects. The cross-functional working group will consist of senior representatives from various departments, including the CEO, and the Climate Change & Environment Team. This is in line with market practice.

#### Evaluation and selection

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability 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 Green Bond proceeds | <input type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input 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 checked="" type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other (please specify):   |   |

**3. MANAGEMENT OF PROCEEDS**

Overall comment on section *(if applicable)*:

KOMIPO will track the net use of proceeds through a Green Bond Register. The proceeds of transaction will be deposited in the general funding accounts and earmarked for allocation to eligible projects. Pending allocation from proceeds will be held in accordance with KOMIPO's general liquidity management policy and can be invested in money market instruments, cash, cash equivalents, investment grade securities or other marketable securities and short-term instruments with satisfactory credit ratings and market liquidity. This is in line with market practice.

**Tracking of proceeds:**

- |   |
|---|
| <input checked="" type="checkbox"/> Green 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 checked="" type="checkbox"/> Allocation to a portfolio of disbursements   |
| <input checked="" type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input checked="" type="checkbox"/> Other <i>(please specify)</i> : List of Eligible Use of Proceeds and brief description |

**4. REPORTING**

Overall comment on section *(if applicable)*:

KOMIPO intends to provide a Green Bond Progress Report published within its Investor Relations webpage within one year of issuance, and on an annual basis. The allocation reporting will include the aggregate amount allocated to eligible projects, as well as its proportion of total disbursements, and impact reporting will include relevant metrics. Sustainalytics views KOMIPO's allocation and impact reporting as aligned with market practice.

**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 checked="" type="checkbox"/> Other ( <i>please specify</i> ): List of Eligible Use of Proceeds by geographic location and Eligible categories |

**Information reported:**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Allocated amounts     | <input checked="" type="checkbox"/> Green 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 (please specify): |                                      |

**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 (please specify):                 |

**Frequency:**

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

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

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> GHG Emissions / Savings | <input checked="" type="checkbox"/> Energy Savings  |
| <input type="checkbox"/> Decrease in water use              | <input checked="" type="checkbox"/> Other ESG indicators (please specify): renewable energy generation or capacity, annual renewable portfolio standards (RPS) purchased, and number of electric and/or fuel cell vehicles and charging stations built. |

**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 checked="" type="checkbox"/> Other (please specify): Investor Relations website |
| <input type="checkbox"/> Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review): |  |

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.)

KOMIPO Green Bond Framework:

[https://www.komipo.co.kr/eng/board/BRD\\_000092/boardMain.do?mnCd=EN030204&pageSize=10](https://www.komipo.co.kr/eng/board/BRD_000092/boardMain.do?mnCd=EN030204&pageSize=10)

**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 INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP**

- i. Second Party Opinion: An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. Certification: An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. Green Bond Scoring/Rating: An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

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

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