

# Second-Party Opinion GREP Green Bond Framework

Hungarian Lighting Company



Scope ESG Analysis has assessed the alignment of the Green Bond Framework (the Framework) of the issuer with the 2021 Green Bond Principles (GBP) of the International Capital Markets Association (ICMA). The Framework has received the second highest score on our 'leaf score' system with two leaves.

This second-party opinion is based on the four GBP components: use of proceeds, process for project evaluation and selection, management of proceeds, and reporting.

## Issuance

| GBP components                               | Fulfilment  | Overall assessment |
|--|---|--------------------|
| Use of proceeds                              | <ul style="list-style-type: none"> <li>Energy efficiency</li> </ul>   |                    |
| Process for project evaluation and selection | <ul style="list-style-type: none"> <li>Establishment of a green committee with four members, including a technical expert to manage the project selection and evaluation process</li> </ul>   |                    |
| Management of proceeds                       | <ul style="list-style-type: none"> <li>Proceeds documented, updated, and managed in internal green finance register</li> <li>Proceeds will be held in fixed-term deposit until they are invested</li> </ul>   |                    |
| Reporting                                    | <ul style="list-style-type: none"> <li>Annual reporting of allocation of proceeds within 12 months of first issuance</li> <li>Impact metrics including energy consumption, greenhouse gas emissions, waste reduction and recycling share</li> <li>Impact metrics will be measured, monitored, and published regularly to ensure transparency</li> </ul> |                    |

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Figure 1: Alignment with United Nations Sustainable Development Goals



Figure 2: Engagement with EU Taxonomy Draft Regulation



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## Methodology

We were commissioned by GREP to provide a second-party opinion on its Framework. We based our opinion on:

- GREP's internal documents;
- Interviews with relevant stakeholders of GREP and its green finance committee;
- Documents on external market/regulatory research; and
- Data from our internal database.

Our leaf score visually represents our evaluation and verification of the environmental impact of GREP's Framework. The ambitions within each green project category can qualify for individual leaf scores. In the case of multiple project categories, the aggregate of the scores yields the overall score of our second-party opinion report.

Our minimum requirement for GBP alignment is that each green project category of the Framework has a positive environmental impact, as represented by one green leaf.

| Scoring   | Description  | GBP category      | Sector criteria  |
|---|--|-------------------|--|
|    | Transformative environmental/social contribution and strong alignment with all relevant market standards | Energy efficiency | The light source replacement performs in a high class of energy efficiency and no waste is generated in the use phase or end-of-life phase. The Framework fully complies with the EU Taxonomy. |
|  | Significant environmental/social contribution and alignment with selected market standards               | Energy efficiency | Energy efficiency is significantly increased, and the replacement product is carbon neutral. The activity aligns with at least two of three general criteria of the EU Taxonomy.               |
|  | Environmentally/socially friendly but limited contribution to long-term transformation                   | Energy efficiency | The light source replacement increases energy efficiency but cannot reach zero emissions or generates waste.   |
|  | No significant environmental/social contribution   | Energy efficiency | The light source replacement does not increase energy efficiency although more efficient products are available.   |
|  | Negative environmental/social impact   | Energy efficiency | The light source replacement decreases energy efficiency or generates toxic waste.   |

## Introduction

GREP Green Public Lighting Zrt. is a family business founded in 2019. The main activity of the company is the implementation of public lighting modernisation projects, defined by the European Union as energy performance contracting construction. EPC is a mechanism for organising energy efficiency financing. EPC involves an energy service company (ESCO) which provides various services, such as finances and guaranteed energy savings. The remuneration of the ESCO depends on the achievement of the guaranteed savings. The ESCO stays involved in the measurement and verification process for the energy savings in the repayment period. ESCOs and EPC are mostly found in the public sector and, to a lesser extent, in the industrial and commercial building sectors.

According to the IEA, the size of the global ESCO market increased by 6% compared to previous year to USD 33bn in 2020, continuing steady growth since 2015<sup>1</sup>.

In addition to its main activity, GREP also performs other electrical network construction and development tasks, including design tasks, project preparation and execution.

In 2015, Hungary launched the National Energy Strategy to 2030. The strategy aims to strengthen energy independence and security while focusing on clean, smart and affordable energy to increase energy efficiency, as well as the decarbonisation of energy production with the combined use of nuclear and renewable energy.<sup>2</sup>

In order to achieve national decarbonisation and energy efficiency objectives, investment needs are estimated at around HUF 14,700bn, corresponding to around 3.5% of GDP annually.<sup>3</sup>

GREP intends to issue a HUF 5bn green bond under the Bond Funding for Growth Scheme launched by the National Bank of Hungary. The green bond will: i) finance new public lighting modernisation projects already under preparation (EPC); ii) finance the replacement of existing loans for ongoing public lighting modernisation projects; and iii) pre-finance the company's foreign expansion<sup>4</sup>. The fund will be used for investments focusing on the modernisation of public lighting, which will reduce greenhouse gas emissions through higher energy efficiency.

## Overall sustainability strategy

GREP has not defined an overarching climate strategy to date. Instead, the company has stated its main objective, which is to contribute to the improvement of energy efficiency in Hungary by assisting local authorities in changing traditional lighting methods to LED technology.

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<sup>1</sup> <https://www.iea.org/events/iea-webinar-on-evolving-energy-service-companies-escos-in-emerging-economies>

<sup>2</sup> [https://ec.europa.eu/energy/sites/ener/files/documents/hu\\_final\\_necp\\_main\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/hu_final_necp_main_en.pdf)


<sup>3</sup> [https://ec.europa.eu/energy/sites/default/files/documents/necp\\_factsheet\\_hu\\_final.pdf](https://ec.europa.eu/energy/sites/default/files/documents/necp_factsheet_hu_final.pdf)

<sup>4</sup> We understand that GREP's foreign expansion pre-financing will be used only for public lighting projects.

## Issuance

### Green Bond Principles: assessment of issuance

#### I. Use of proceeds

| Green project category   | Fulfilment   | Leaf score  |
|--------------------------|--|---|
| <b>Energy efficiency</b> | Investment in new public lighting projects with municipalities, producing a total reduction of 3392 tonnes of CO <sub>2</sub> equivalent.<br>In case of insufficient new projects, GREP intends to replace loans that finance ongoing public lighting projects in alignment with the Green Bond Framework. |  |

GREP's Framework scores two leaves overall

**Scope's assessment:** We assign the issuance an individual category (and aggregate) score of two leaves. The Green Bond Principles recognise energy efficiency as an eligible project category which contributes to environmental objectives. GREP intends to invest in new public lighting projects with municipalities and refinance already ongoing public lighting projects with the aim of reducing a total of 4200 tonnes of CO<sub>2</sub> equivalent and saving 10,070,973 kWh of energy consumed.

Uniform and predictable project selection via public tenders

#### II. Process for project evaluation and selection

GREP is committed to ensuring a transparent, written record of internal procedures and practices for the use of green proceeds. Projects are selected based on negotiation processes with municipalities and the order of implementation depends on the municipalities' tendering activity. There are no preferences for municipalities. All the projects rely on the same technical solution, their design and implementation are adapted to local requirements and conditions, as well as the municipalities' special needs.

Project selection is a simple process as numerous municipalities in Hungary provide public lighting service using depreciated infrastructure. GREP applies via public tenders, for projects subject to rules set by the tenders. The various projects face the same environmental impact in reducing energy consumption and pollution. The restriction of its projects to such tenders ensures that GREP does not perform any activities which significantly harm the environment.

The management has established a Green Committee composed of two board members, the CFO and an invited environmental expert. One of the board members is appointed as Chief Green and Sustainability Officer. The committee meets at least on a quarterly basis.

**Scope's assessment:** GREP's project evaluation process is aligned with the GBP. The inclusion of an environmental expert in the Green Committee ensures the quality and credibility of the process. More importantly, replacing conventional light bulbs by LEDs is the core business of the company, which lowers the risks of false selection or misjudgement of project characteristics.

Establishment of a separate account for green bond proceeds

#### III. Management of proceeds

The proceeds of the green bond will be managed by the Green Committee and listed in GREP's green finance register. The register will be monitored and supervised regularly and also reviewed annually by external auditors, or another third party.

GREP intends to keep the net proceeds of the green bond as a fixed-term deposit until they are invested in a project. Refinancing will be performed within 30 days after bond issuance. The net proceeds of the green bond will be kept in a separate account. As long as the green bond is outstanding, the balance of the tracked net proceeds will be

GREP publishes annual impact reports on project outcomes

periodically adjusted to match allocations to the green project carried out during that period. GREP intends to use approximately 72% of the green bond proceeds for financing and approximately 28% for refinancing. It has committed to communicating to investors the intended types of temporary placement for the balance of unallocated net proceeds. GREP also commits to supplementing the management of proceeds with the appointment of an external auditor, or other third party, to verify the internal tracking method and the allocation of funds from the green bond.

**Scope's assessment:** GREP's management of proceeds comply with the GBP.

#### IV. Reporting

GREP has committed to publish an annual update on the activities related to its green bond issuance. The company will provide an annual allocation report, which documents the allocation of its financed and refinanced projects until full allocation. The first annual report will be published within one year of the first green bond issuance to be followed by annual updates until full allocation. Reports will also document any event of material changes to the allocation.

GREP will also publish annual impact reports on its website. The relevant information provided will include:

- Use of proceeds
- A breakdown of proceeds in relation to eligible projects
- The amount of unallocated proceeds
- A closer description of the financed activities

The impact report will detail the expected and achieved environmental impact from allocated proceeds. It will also include performance indicators, as listed in the below table, to document the environmental impact of the planned investments. These indicators will be measured and monitored regularly by an auditor. The figures will also be available in the company's annual report and published on the website.

| Category   | Activity                       | Impact report  |
|--|--------------------------------|--|
| Energy efficiency                                    | Implementation of new projects | Saved energy consumption                             |
|  |                                | CO <sub>2</sub> equivalent avoided or reduced t/year |
|  |                                | Number of luminaires changed                         |
|  | Debt replacement               | Saved energy consumption kWh/year                    |
| CO <sub>2</sub> equivalent avoided or reduced t/year |                                |  |

| Allocation report  |
|--|
| Proportion of green investments in the corporate portfolio |
| Green proceeds utilisation                                 |
| Use of green proceeds by environmental purpose             |
| Other relevant indicators                                  |

GREP's Framework advances four SDGs

#### Scope's assessment:

The reporting proposed by GREP is aligned with the Green Bond Principles' criteria.

#### Scope's opinion

##### Alignment with SDGs

The SDGs adopted by all UN member states in 2015 are a collection of 17 global targets that form an agenda for achieving sustainable development by 2030. GREP's Framework deems the following SDGs relevant:

- 7. Affordable and clean energy:** Ensure access to affordable, reliable, sustainable, and modern energy for all.
- 11. Sustainable cities and communities:** Make cities and human settlements inclusive, safe, resilient, and sustainable.
- 12. Responsible consumption and production:** Ensure sustainable consumption and production patterns
- 13. Climate action:** Take urgent action to combat climate change and its impacts.

Appendix 3 lists relevant indicators for measuring GREP's contribution to each SDG. The contribution to the SDGs can be quantified in post-issuance impact reporting.

##### Alignment with EU taxonomy

The Taxonomy Regulation was published in the Official Journal of the European Union on 22 June 2020 and entered into force on 12 July 2020. It establishes a basis for the EU taxonomy by setting out four overarching conditions that a particular economic activity must meet to qualify as environmentally sustainable. The Taxonomy Regulation establishes six environmental objectives: climate change mitigation, climate change adaptation, the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and control, and the protection and restoration of biodiversity and ecosystems. A first delegated act on sustainable activities for climate change adaptation and mitigation objectives was approved in principle on 21 April 2021 and formally adopted on 4 June 2021 for scrutiny by co-legislators. A second delegated act for the remaining objectives will be published in 2022.

The project categories of GREP's Framework pertain to the following taxonomy sectors for which the first delegated act specifies technical screening criteria:

- Installation, maintenance and repair of energy efficiency equipment

The technical screening criteria for the installation, maintenance and repair of energy efficiency equipment specify that the installation and replacement of energy efficient light sources must comply with minimum requirements set for individual components and systems in the applicable national measures and rated in the highest two populated classes of energy efficiency in accordance with EU regulation. We believe that GREP's LED luminaires activity complies with the taxonomy regulation, with LED luminaires categorised among the highest energy-efficient technologies in public lighting.

The EU taxonomy also defines a 'do no significant harm' (DNSH) assessment. The DNSH assessment ensures that a substantive contribution is made to one or more environmental objectives without harming other environmental objectives. For this activity, the DNSH criteria focus on climate change adaptation and pollution prevention and control. The criteria refer to Appendix A and C of the Taxonomy Annex. Appendix A does not directly relate to GREP's activity and GREP has confirmed its adherence to the criteria set out in Appendix C.

GREP's Framework voluntarily engages with EU Taxonomy Regulation draft

GREP confirms adherence to DNSH criteria

Lastly, minimum social safeguards require compliance with the following principles and guidelines:

- OECD Guidelines for Multinational Enterprises
- UN Guiding Principles on Business and Human Rights
- Principles and rights set out in the eight fundamental conventions identified in the Declaration of the International Labour Organisation on Fundamental Principles and Rights at Work
- International Bill of Human Rights

#### Scope confirms compliance with minimum social safeguards

The activity directly financed by the issuance will take place in Hungary, where adherence to EU labour standards is compulsory. With regard to supply chain impacts, the project luminaires are only produced by Philips International, which is a signatory of the UN Global Compact and voluntarily adheres to these guidelines. We assume that Philips is the predominant supplier for GREP and the company always requires ISO 50001 certificate from subcontractors. According to GREP's documents, the company will only use alternative suppliers under specific circumstances. These include special requests made by municipalities or technical requirements for other solutions. We therefore assume that GREP complies with the minimum social safeguards as required by the EU taxonomy.

#### Impact of proceeds

#### Global lighting is responsible for 15% of global electricity consumption and 4.6% of greenhouse gas emissions.

According to UNEP (2017)<sup>5</sup>, lighting is responsible for roughly 15% of global electricity consumption and 4.6% of greenhouse gas emissions. Public lighting accounts for 2.3% of the total electricity consumed in the world<sup>6</sup>. The International Energy Agency estimates that a switch to LED lights can save an average of 50% in energy costs, which results in global savings of USD 160bn in energy costs, and 555 million tons of CO<sub>2</sub><sup>7</sup>. The European Commission aims to build an economy with net zero greenhouse gas emissions by 2050. Key targets for 2030 have been raised in the European Green Deal to achieve the following objectives: cuts in greenhouse gas emissions (from 1990 levels) of at least 40%, a renewable energy share of at least 32%, and an improvement in energy efficiency of at least 32.5%<sup>8,9</sup>. Hungary's energy efficiency target is to ensure that the country's final energy consumption does not exceed the 2005 value in 2030 (785 PJ). In case final energy consumption exceeds the level for 2005, such increase should exclusively be obtained from carbon neutral energy resources<sup>10</sup>.

Many public lighting installations were created 30 or 40 years ago and are now obsolete. There is a need to implement street lighting designs that fulfil lighting requirements, avoid energy waste, achieve eco-efficiency and, at the same time, result in sustainability for municipalities<sup>6</sup>. Nowadays, LED technology has reached levels of energy efficiency in the range of 70-200 lm/W with increasingly lower costs<sup>11</sup>. In addition, their lifetime expectation can be up to five times greater than that of discharge lamps (100,000 h LED vs. 20,000 h HPS)<sup>12</sup>. The application of quality LED instead of quality HPS luminaires provides energy savings of around 31% in the initial lighting regime. Also, with dimming

<sup>5</sup> <https://united4efficiency.org/resources/accelerating-global-adoption-energy-efficient-lighting/>

<sup>6</sup> <https://www.mdpi.com/2071-1050/12/1/190>

<sup>7</sup> Street and Roadway Lighting Market - Growth, Trends, Forecasts (2020 - 2025), 2020

<sup>8</sup> [https://ec.europa.eu/clima/policies/strategies/2030\\_en](https://ec.europa.eu/clima/policies/strategies/2030_en)

<sup>9</sup> *LCA of an industrial luminaire using product environmental footprint method*. Wu, You and Su, Daishong. 2021. UK : Elsevier Ltd., 2021, Journal of Cleaner Production, Vol. 305.

<sup>10</sup> [https://ec.europa.eu/energy/sites/ener/files/documents/hu\\_final\\_necp\\_main\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/hu_final_necp_main_en.pdf)

<sup>11</sup> Djuretic, Andrej and Kostic, Miomir. 2018. *Actual energy savings when replacing high-pressure sodium with LED luminaires in street lighting*. s.l. : Energy, 2018. pp. 367-378.

<sup>12</sup> Shahzad, K., et al. 2018. An ecological feasibility study for developing sustainable street lighting system. s.l. : Journal of Cleaner Production, 2018. pp. 683-695

control technology, the annual active energy consumption is about 50% lower for LED than for HPS<sup>9</sup>. Hence, LED technology is a major contributor to improving energy efficiency.

**Table1<sup>13</sup>: HPS & LED characteristics**

| Characteristics                          | High pressure sodium luminaire | LED luminaire |
|--|--------------------------------|---------------|
| <b>Luminous efficacy range (initial)</b> | 105-125lm/W                    | 150-200 lm/W  |
| <b>Lamp lifetime</b>                     | 20,000 hr                      | 100,000 hr    |
| <b>Color rendering index (RA)</b>        | 25                             | 80-95         |
| <b>Correlated color temperature</b>      | 2,000-2,100 K                  | 2,700-6,500 K |

#### GREP's impact on greenhouse gas emissions

Hungary aims to reduce greenhouse gas emissions by at least 40 % by 2030 compared to 1990, meaning that in 2030 gross emissions may not exceed gross 56.19 million tonnes of CO<sub>2</sub> equivalent. Greenhouse gas emissions can be reduced by decreasing the quantity of consumed energy, increasing the use of renewable energy sources, and by replacing fossil energy sources with nuclear energy or with other energy sources with lower emission factors<sup>14</sup>.

The replacement of HPS luminaires with LED luminaries provides around 31% lower energy consumption, thus raising the energy efficiency ratio by saving energy and reducing greenhouse gas emissions.

GREP is aware of the opportunity to reduce Hungary's carbon footprint and environmental impact through the implementation of newly developed street lighting infrastructure. Therefore, the company is committed to apply only luminaries of the highest quality in its business activity. According to GREP's supplier policy, the company uses only luminaries produced by Philips International in new street lighting projects unless technical requirements (e.g. antique street lamps) or a special decision on the part of the municipality necessitate other solutions. In these cases, the technical parameters and environmental features of the lamps will be exactly the same as Philips luminaries, only their price will influence the project budget. The choice of Philips luminaries is also supported by the manufacturer's commitment to achieving a zero net carbon footprint by 2030 in all its factories, thus sharing the responsibility to reduce global warming to 1.5 degrees Celsius.

GREP intends to install 48,557 new luminaries, saving 10,993,535 kWh of electricity and reducing carbon emissions by 4,152 tonnes of CO<sub>2</sub> equivalent<sup>15</sup>.

#### GREP's impact on pollution prevention and control

GREP plans to replace between 31,000 and 48,000 conventional lamps with the modernisation projects. Hungary runs around 1.4 million public lighting luminaires with current modernisation of a total of 350-400 thousand units.

**Waste reduction:** While conventional bulbs previously had to be changed every three years, the modern LED technology's life cycle spans 25 years (around 100,000 hours). LED technology has counts for positive environmental impacts as less waste is created and less emissions are produced, with maintenance occurs every 25 years instead of every three years.

<sup>13</sup> <https://united4efficiency.org/wp-content/uploads/2017/04/U4E-LightingGuide-201703-Final.pdf>

<sup>14</sup> [https://ec.europa.eu/energy/sites/ener/files/documents/hu\\_final\\_necp\\_main\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/hu_final_necp_main_en.pdf)

<sup>15</sup> GREP methodology: (performance of old luminary – performance of new luminary) X luminary lifetime in hours



**We have no information on GREP’s procedures and involvement in the recycling of old luminaires and/or the recycling of the LEDs after the use-phase. Accordingly, this SPO does not evaluate GREP’s contribution to waste reduction or the recycling of light.**

**Light pollution:** GREP uses Philips lighting types which are designed for large-scale LEDification projects<sup>16</sup>. Due to LED luminaires’ design, misdirected artificial light pollution can be reduced significantly via the uniform and efficient distribution of light with the help of a reflective matrix inserted in the lamp’s body.

#### **Product impact: Upstream and downstream comparison**

Life cycle analysis of manufacturing, use and end-of-life of luminaires (LED vs HPS) consist of a light source (lamp or array), control gear (ballast or driver) and luminaire cover. Manufacturing included the acquisition of raw materials, the manufacturing processes for materials and parts, the transport of the materials and parts, and packaging, both interim and final product. The use phase accounted only for electricity consumption during operation while the end-of-life includes the transport and disposal of the materials<sup>17</sup>.

#### **Upstream: manufacturing impact**

The manufacturing of LEDs contributes an environmental impact from the production of luminaire covers (92%), while drivers and LED arrays account only for 4% and 3% of impacts respectively. The major impact area is stratospheric ozone depletion. With regard to HPS, the production of luminaire covers and ballasts both have a significant impact (62% and 22% respectively). Climate change and abiotic resources are the major impact area for the HPS currently in use. LED installation could significantly contribute to reducing the impact on climate change and abiotic resources depletion.

**Table 3: Major impact area- HPS vs LED**

| Type | Functional unit | Major impact area             | Average impact share |
|------|-----------------|-------------------------------|----------------------|
| HPS  | Luminaire cover | Climate change                | 62%                  |
| HPS  | Ballast         | Stratospheric ozone depletion | 22%                  |
| HPS  | Capacitor       | Photo-oxidant formation       | 9%                   |
| HPS  | Lamp            | Abiotic resources depletion   | 7%                   |
| LED  | Luminaire cover | Stratospheric ozone depletion | 92%                  |
| LED  | Driver          | Photo-oxidant formation       | 4%                   |
| LED  | LED array       | Acidification                 | 3%                   |

#### **Downstream: used impact**

LED luminaires cause approximately 26% lower environmental impacts than HPS luminaires. In comparison with 2020 luminaire technologies per lumen hour, LED luminaires accounted for 53% lower environmental impacts. In addition, the comparison per road kilometre, the average environmental impact of the LED luminaires was 57%, while HPS was 97%<sup>17</sup>.

<sup>16</sup> GREP uses the following types of Philips lights: BGP281 LED30-4S/830 II DM10 DDF2 D18 SRG, BGP281, LED45-4S/740 I DN10 48/60S and BGP282 LED100-4S/740 I DM50 48/60S

<sup>17</sup> Tähkämö, L. and Halonen, L. (2015). Life cycle assessment of road lighting luminaires – Comparison of light-emitting diode and high-pressure sodium technologies. *Journal of Cleaner Production*, 93, pp.234–242.

#### GREP manages risks through internal control systems

#### Risks

The financing and refinancing of green public lighting projects entail social and environmental risks. We evaluate the issuer as well positioned to address direct risks associated with its green project category. In Hungary, existing labour laws and environmental protection standards comply with the EU-wide minimum threshold for reducing risks.

| Associated project risks                              | GREP's risk mitigation measures  |
|---|--|
| <b>Health and safety risks</b>                        | In Hungary, the Act of 1993 concerning Occupational Safety and Health aims to ensure the health and safe working conditions of workers, followed by the sub-contractors of GREP <sup>18</sup> . In addition, there are EU-level regulations and minimum standards regarding the health and safety of workers. <sup>19</sup> GREP has ISO 45001 certification for health and safety management.   |
| <b>Light pollution</b>                                | GREP uses Philips's lighting for street BGP281 LED30-4S/830 II DM10 DDF2 D18 SRG, BGP281 LED45-4S/740 I DN10 48/60S and BGP282 LED100-4S/740 I DM50 48/60S, which are designed for large-scale LED lighting projects. Due to LED luminaries' design, misdirected artificial light pollution can be reduced significantly via the uniform and efficient distribution of light with the help of a reflective matrix inserted in the lamp's body. |
| <b>High impact of material resources on ESG score</b> | GREP requires an ISO 50001 certificate from subcontractors. They are required to align with this standard, commit to addressing their environmental impact, conserve resources and improve their bottom line through efficient energy management.  |
| <b>Environmental risk</b>                             | GREP has ISO 14001 certification as a part of the standards for environmental management systems (EMS) and serves as a guide for the construction and development of EMS.  |

<sup>18</sup> <https://www.ilo.org/dyn/natlex/docs/WEBTEXT/38155/64930/E93HUN01.htm>

<sup>19</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31989L0391&from=EN>

## I. Appendix: Documents provided by GREP

| Issuer document   | Document description  |
|---|---|
| <b>Market research on Hungarian real estate standards</b> | Hungary's National Energy Efficiency and Action Plan until 2020 |
|   | Hungary's National Energy Strategy to 2030                      |
|   | Hungary's National Energy and Climate Plan                      |
|   | UNEP  |
| <b>General information provided by GREP</b>               | Company overview  |
|   | Environmental performance of GREP's past projects               |
| <b>Green bond-specific documentation provided by GREP</b> | Green Bond Framework  |
|   | Minutes of Green Committee Charter meetings                     |
|   | Energy verifications  |
|   | Zero carbon certificate from GREP                               |
|   | Technical description of Philips luminaires                     |
|   | Energy efficiency and emission reduction methodology            |

## II. Appendix: EU and Hungarian regulations





|                            | Act LVII of 2015 on energy efficiency <sup>20</sup>   | Act No. 86 of 2011 on electricity <sup>21</sup>  | Act CLXXXV of 2012 on waste <sup>22</sup>   |
|----------------------------|---|--|---|
| <b>Description</b>         | The purpose of this Law is to identify actions aiming to achieve national energy efficiency goals and to this end, ensure the comprehensive energy supply and energy use efficiency.<br>It is applicable to public tenders for energy efficiency where public authorities should conclude contracts only for high energy efficiency products, services, or buildings. | This act applies to generation, transmission, distribution, trade, and consumption of electricity; the establishment and decommissioning of electrical installations.<br>This Act is framed in the belief that utilization of renewable energies and waste as fuel shall be promoted in order to protect the environment and nature. | The Hungarian Legislative regulation implements a series of EU Commission decisions, directives, Council directives and regulations, which must be followed by companies, energy providers, and municipalities. |
| <b>Areas of assessment</b> | <ul style="list-style-type: none"> <li>Energy efficiency</li> </ul>   | <ul style="list-style-type: none"> <li>Energy efficiency</li> <li>Conservation in the interest of sustainable development</li> <li>Renewable energy sources</li> <li>Waste management</li> </ul>   | <ul style="list-style-type: none"> <li>Waste and hazardous substances</li> <li>Waste management</li> <li>Energy efficiency</li> </ul>   |
| <b>Accreditation</b>       | Mandatory Hungarian law   | Mandatory Hungarian law  | Mandatory Hungarian regulation  |

<sup>20</sup> <https://www.ecolex.org/details/legislation/act-no-lvii-of-2015-concerning-energy-efficiency-lex-faoc146629/>

<sup>21</sup> <https://www.climate-laws.org/geographies/hungary/laws/act-no-86-of-2011-on-electricity-electricity-act>

<sup>22</sup> <https://www.ecolex.org/details/legislation/act-clxxxv-of-2012-on-waste-lex-faoc121650/>

### III. Appendix: SDG alignment

| GBP category      | SDG alignment   | Indicators to be evaluated  |
|-------------------|---|---|
| Energy efficiency |     | <ul style="list-style-type: none"> <li>• Annual energy reduced or avoided in MWh or GWh (electricity) and MWh or GWh (other energy savings)</li> <li>• Annual gross greenhouse gas emissions from the projects in tonnes of CO<sub>2</sub> equivalents</li> <li>• Number of luminaries changed</li> </ul> |

#### IV. Appendix: EU Taxonomy alignment mitigation

| Issuer's framework activity   | Installation, maintenance and repair of energy efficiency equipment   |   |
|---|---|---|
| Taxonomy activity   | 7.3.  |   |
|   | EU technical mitigation criteria  | Comments on potential alignment   |
| <b>Mitigation criteria (metric and threshold)</b>                   | <p>The activity consists in one of the following individual measures provided that they comply with minimum requirements set for individual components and systems in the applicable national measures implementing Directive 2010/31/EU and, where applicable, are rated in the highest two populated classes of energy efficiency in accordance with Regulation (EU) 2017/1369 and delegated acts adopted under that Regulation:</p> <p>(a) addition of insulation to existing envelope components, such as external walls (including green walls), roofs (including green roofs), lofts, basements and ground floors (including measures to ensure air-tightness, measures to reduce the effects of thermal bridges and scaffolding) and products for the application of the insulation to the building envelope (including mechanical fixings and adhesive);</p> <p>(b) replacement of existing windows with new energy efficient windows;</p> <p>(c) replacement of existing external doors with new energy efficient doors;</p> <p>(d) installation and replacement of energy efficient light sources;</p> <p>(e) installation, replacement, maintenance and repair of heating, ventilation and air conditioning (HVAC) and water heating systems, including equipment related to district heating services, with highly efficient technologies;</p> <p>(f) installation of low water and energy using kitchen and sanitary water fittings which comply with technical specifications set out in Appendix E to this Annex and, in case of shower solutions, mixer showers, shower outlets and taps, have a max water flow EN 173 EN of 6 L/min or less attested by an existing label in the Union market.</p> | <p>The activity is aligned and consists of:</p> <p>(d) installation and replacement of energy efficient light sources;</p>  |
|   | EU taxonomy DNSH criteria   | Comments on potential alignment   |
| <b>Climate change adaptation</b>                                    | The activity complies with the criteria set out in Appendix A to this Annex   | Because the climate-related hazards listed in Section II of Appendix A are not directly material to the activity financed under this framework, no climate risk or vulnerability assessment has been conducted. |
| <b>Sustainable use and protection of water and marine resources</b> | N/A   |   |
| <b>Transition to a circular economy (circular economy)</b>          | N/A   |   |
| <b>Pollution prevention and control</b>                             | <p>Building components and materials comply with the criteria set out in Appendix C to this Annex.</p> <p>In case of addition of thermal insulation to an existing building envelope, a building survey is carried out in accordance with national law by a competent specialist with training in asbestos surveying. Any stripping of lagging that contains or is likely to contain asbestos, breaking or mechanical drilling or screwing or removal of insulation board, tiles and other asbestos containing materials is carried out by appropriately trained personnel, with health monitoring before, during and after the works, in accordance with national law.</p>   | The issuer has confirmed that the activity does not lead to the manufacturing, placing on the market or use of the materials listed in Appendix C. The activity also does not relate to thermal insulation.     |
| <b>Protection and restoration of biodiversity and ecosystems</b>    | N/A   |   |



## Second-Party Opinion

### GREP Green Bond Framework

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