

# Second-Party Opinion

## PORR Green Finance Framework

### Evaluation Summary

Sustainalytics is of the opinion that the PORR Green Finance Framework is credible and impactful, and aligns with the four core components of the Green Bond Principles 2018 and Green Loan Principles 2018. This assessment is based on the following:



**USE OF PROCEEDS** The eligible categories for the use of proceeds are aligned with those recognized by the Green Bond Principles and Green Loan Principles. Sustainalytics considers that the financing of (i) Green Buildings and (ii) Pollution Prevention and Control will contribute the recycling of materials and GHG emission reduction as well as advance UN Sustainable Development Goals 7, 9, 11 and 12. The framework will be used for green bonds, green SSDs (Schuldscheindarlehen) and loans. PORR does not disclose a lookback period for refinancing but confirmed to Sustainalytics that loans of the financed green buildings are not older than 2-3 years. In addition, the company commits to disclosing the amount of existing and new projects in its annual reporting.



**PROJECT EVALUATION / SELECTION** PORR's internal process in evaluating and selecting projects is aligned with market practice. PORR's Green Finance Committee is comprised of members from Corporate Social Responsibility and Sustainability, Risk, Accounting, Investor Relations and other parties, will be responsible for project selection and evaluation. This is in line with market practice.



**MANAGEMENT OF PROCEEDS** PORR's processes for management of proceeds is aligned with market practice. PORR has systems in place to track the use of proceeds. Unallocated proceeds will be allocated in PORR's treasury liquidity portfolio (in cash or cash equivalents, money market funds amongst others). This is in line with market practice.



**REPORTING** PORR intends to report on the allocation of proceeds on its website on an annual basis until full allocation. In addition, PORR is committed to reporting on impact in its Sustainability Report, Annual Report or specific Impact Report. Indicators include estimated annual energy consumption of green buildings, estimated avoided carbon emissions (in tCO<sub>2eq</sub>), sustainable labels and certificates of green buildings, volume of construction material recycled, and prevented CO<sub>2</sub> emissions (in tCO<sub>2eq</sub>). The impact reporting may also be supplemented with case studies on specific projects. In Sustainalytics' view reporting on these metrics is in line with market practice.

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<b>Evaluation date</b>	20 December 2018
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<b>Issuer Location</b>	Vienna, Austria
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## Introduction

PORR AG (“the company”) is an Austrian construction company mainly operating in Austria, Germany, Poland, the Czech Republic, Switzerland and internationally. PORR offers building construction services, civil engineering and infrastructure construction services, and design and engineering services. PORR was founded in 1869 and is headquartered in Vienna, Austria.

PORR has developed the PORR Green Finance Framework (the “Framework”) under which it intends to issue green bonds, green SSDs (Schuldscheindarlehen) and loans and use the proceeds to finance and/or refinance, in whole or in part, existing or future projects that improve the environmental footprint of PORR’s premises and facilitate the recycling of construction and demolition waste. The Framework defines eligibility criteria in two areas:

1. Green Buildings
2. Pollution Prevention & Control

PORR engaged Sustainalytics to review the PORR Green Finance Framework and provide a second-party opinion on 1) its alignment with the Green Bond Principles 2018 (the “GBP”), as administered by the International Capital Market Association (the “ICMA”),<sup>1</sup> and the Green Loan Principles 2018 (“the GLP”),<sup>2</sup> and 2) the Framework’s environmental credentials. This Framework has been published in a separate document.<sup>3</sup>

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

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

<sup>1</sup> ICMA’s Green Bond Principles 2018: <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

<sup>2</sup> LMA’s Green Loan Principles 2018: [https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/LMA\\_Green\\_Loan\\_Principles\\_Booklet-220318.pdf](https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/LMA_Green_Loan_Principles_Booklet-220318.pdf)

<sup>3</sup> PORR corporate website, <https://porr-group.com/en/investor-relations/>

## Sustainalytics' Opinion

### Section 1: Sustainalytics' Opinion on the PORR Green Finance Framework

#### Summary

Sustainalytics is of the opinion that the PORR Green Finance Framework is credible and impactful, and aligns with the four core components of the Green Bond Principles 2018. Sustainalytics highlights the following elements of PORR's Green Finance Framework:

- 1) Use of Proceeds:
  - PORR's Green Finance Framework is intended to be used for green bonds, green SSDs (Schuldscheindarlehen) and loans. The eligible categories for the use of proceeds – (i) Green Buildings and (ii) Pollution Prevention and Control – are aligned with those recognized by the Green Bond Principles and Green Loan Principles.
  - PORR includes individual investments to improve the environmental performance of its premises under the Green Buildings category including rainwater recovery and drainage systems, heat pumps, energy storage, lighting (e.g. LED), energy monitoring, energy-efficiency measures, renewable energy generation and R&D costs to develop more sustainable construction materials. PORR does not apply a threshold for the energy efficiency improvements named, which is a limitation. However, Sustainalytics is of the opinion that the investments will nonetheless improve the environmental and GHG emission performance of the company's premises. In addition, PORR clarified that the investments in the green buildings category will only include buildings and storage facilities and exclude investments in fossil fuel-based technologies.
  - PORR has developed a methodology to identify the top 15% of commercial buildings in Austria regarding energy performance in the local context (see Appendix 2). The methodology was assessed by an independent external subject matter expert, which concluded that, while data for benchmarking according to CBI is lacking in Austria, the chosen approach is credible and valid, and that the calculation method of the emission target complies with the CBI requirement for near zero energy buildings (see Section 3). In addition, PORR uses recognized third-party standards, i.e. LEED, BREEAM and DGNB-Family. A detailed analysis of the standards can be found in Appendix 1.
  - PORR does not disclose a lookback period for refinancing but confirmed to Sustainalytics that loans of the financed green buildings are not older than 2-3 years. In addition, the company commits to disclosing the amount of existing and new projects in its annual CSR Report.
  - Sustainalytics recognizes that the use of proceeds may be allocated to OPEX (operational expenditures) that is specific to for recycling facilities. Given the nature of the projects, Sustainalytics believes that OPEX will be important to maintain projects and will contribute to sustaining positive environmental impacts. Sustainalytics welcomes that PORR has identified OPEX expenditures and that it tracks OPEX project-by-project.
- 2) Project Evaluation and Selection:
  - PORR's internal process in evaluating and selecting projects is aligned with market practice. PORR's Green Finance Committee comprised of members from Corporate Social Responsibility and Sustainability, Risk, Accounting, Investor Relations and other parties, will be responsible for project selection and evaluation.
- 3) Management of Proceeds:
  - PORR's processes for management of proceeds is aligned with market practice. PORR has systems in place to track the use of proceeds using its Treasury system and separate.
  - Unallocated proceeds will be allocated in PORR's treasury liquidity portfolio (in cash or cash equivalents, money market funds, amongst others).
- 4) Reporting:
  - PORR's allocation reporting aligns with market practice. The company commits to report on the allocation of proceeds per eligible category, existing and new project expenditure and amount of unallocated proceeds on its website on an annual basis until full allocation.
  - Regarding impact reporting, PORR is committed to reporting on impact in its Sustainability Report or a specific Impact Report. Indicators include estimated annual energy consumption of green buildings, estimated avoided carbon emissions (in tCO<sub>2eq</sub>), sustainable labels and certificates of green buildings, volume of construction material recycled, and prevented CO<sub>2</sub> emissions from recycled

material (in tCO<sub>2eq</sub>). The impact reporting may also be supplemented with case studies on specific projects. In Sustainalytics' view, reporting on these metrics is in line with market practice.

### Alignment with Green Bond Principles 2018 and Green Loan Principles 2018

Sustainalytics has determined that the PORR Green Finance Framework aligns to the four core components of the Green Bond Principles 2018 and the Green Loan Principles 2018. For detailed information please refer to Appendix 3: Green Bond/Green Bond Programme External Review Form.

## Section 2: Sustainability Strategy and Performance of the Issuer

### Contribution of Framework to issuer's sustainability strategy and performance

PORR's sustainability strategy includes the (i) environmentally sound use of materials, energy and emissions and (ii) sustainable procurement as two of four core material issues.<sup>4</sup>

As part of its sustainability strategy, PORR has established environmental targets, namely the reduction of specific primary energy consumption and specific GHG emissions by at least 1.5% annually. Given the carbon intensity of the sector, Sustainalytics highlights that the scope and depth of PORR's climate targets reflect and align with other leading European counterparts in the construction industry. Moreover, while PORR does not disclose quantitative targets for recycling and renewable energy, PORR intends to increase the use of recycled materials and plans to gradually transition to renewable energy consumption.

Moreover, the company reports on progress towards its targets, including an annual energy use reduction of 2.8% per production output between 2016 and 2017 and 24.5% of its energy consumed being derived from renewable energy in 2017, indicating the company's efforts to reduce its energy and carbon footprint.<sup>5</sup> PORR reports on recycled material from rubble, broken concrete, asphalt, or natural rock and reported a total of 2.6 million tonnes of material recycled in 2016/2017 and 10% of building material from asphalt.

Overall, Sustainalytics is of the opinion that PORR shows a strong commitment and efforts to embed sustainability practices into its core operations. Given the company's sustainability track record, its targets aligned with current industry trends, as well as its expanding sustainability initiatives such as asphalt recycling, Sustainalytics believes that PORR is well positioned to issue green bonds, SSDs and loans and that these issuances will help the company to advance in its sustainability strategy.

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

Sustainalytics recognizes that green building development along with recycling activities can have environmental and social risks such as soil and groundwater pollution, air emissions, hazardous working conditions, workers health and safety and potential negative impacts on local communities close to the operations. Sustainalytics highlights the following measures and aspects that contribute to mitigating environmental and social risks associated with the use of proceeds:

- The eligible projects are mainly located in Austria, with some projects being located also in Germany and potentially Poland, Czech Republic and Switzerland. Austria has strong environmental and social regulation regarding environmental impact assessments and workers health, requiring environmental impact assessments to be conducted for facilities to treat waste,<sup>6</sup> including assessments on the impact of people, flora, fauna and air, water, climate and soil quality.<sup>7</sup> Indicating that related risks are assessed and managed as part of the permit process for new projects. Germany, Switzerland, Check Republic and Poland have similar laws requiring environmental impact assessments for constructions.<sup>8</sup>
- All of PORR's operations are certified with internationally recognized environmental and health and safety certifications such as the ISO 14001:2015 – Environmental Management System and OHSAS

<sup>4</sup> PORR's Sustainable Value Report 2016/2017 available at: [https://porr-group.com/fileadmin/s\\_porr-group/Konzern/CSR/Englisch/PORR\\_Sustainable\\_Value\\_Report\\_2016-17.pdf](https://porr-group.com/fileadmin/s_porr-group/Konzern/CSR/Englisch/PORR_Sustainable_Value_Report_2016-17.pdf)

<sup>5</sup> PORR's Sustainable Value Report 2016/2017 available at: [https://porr-group.com/fileadmin/s\\_porr-group/Konzern/CSR/Englisch/PORR\\_Sustainable\\_Value\\_Report\\_2016-17.pdf](https://porr-group.com/fileadmin/s_porr-group/Konzern/CSR/Englisch/PORR_Sustainable_Value_Report_2016-17.pdf)

<sup>6</sup> Umweltverträglichkeitsprüfungsgesetz 2000: <https://www.jusline.at/gesetz/uvp-g/paragraf/anlage1>

<sup>7</sup> Umweltverträglichkeitsprüfungsgesetz 2000: <https://www.jusline.at/gesetz/uvp-g/paragraf/1>

<sup>8</sup> German Gesetz über die Umweltverträglichkeitsprüfung – UVPG: <http://extwprlegs1.fao.org/docs/pdf/ger36861E.pdf>; Swiss Umweltverträglichkeitsprüfung (UVP): <https://www.bafu.admin.ch/bafu/de/home/themen/uvp/inkuerze/was-ist-die-uvp-.html>; Ministry of Environment of the Czech Republic: [https://www.mzp.cz/en/environmental\\_impact\\_assessment](https://www.mzp.cz/en/environmental_impact_assessment); Polish Investment and Trade Agency: [https://www.paih.gov.pl/polish\\_law/environmental\\_impact\\_assessment](https://www.paih.gov.pl/polish_law/environmental_impact_assessment)

18001:2007 – Occupational Health and Safety Management System. Having external certifications provides an additional assurance that the operations adopt stringent environmental and social health and safety processes and procedures.

- In addition to its Group-wide OHSAS 18001:2007 certifications, PORR conducts regular occupational health and safety trainings and set a medium-term to reduce the company's lost time injury frequency rate to less than 10 by 2020. Sustainalytics is of the opinion that the company's voluntary health and safety initiatives provide a strong framework for the dissemination of health and safety awareness on relevant topics among employees, complementing the company's external certifications and thus mitigate related risks.
- PORR confirmed that it will use the green bond proceeds to finance the acquisition, construction and or refurbishment of commercial buildings certified under LEED, BREEAM and DGNB green building certification schemes. Sustainalytics is of the opinion that PORR is adequately positioned to mitigate environmental and social risks commonly associated with green building development due to the inherent risk management strategies supported through the processes and requirements typically associated with green building certification schemes.
- The company has strong governance oversight concerning its construction and waste management indicating that the company has management systems in place to mitigate related risk.

Overall, Sustainalytics is of the opinion that PORR has developed credible and rigorous risk management systems and that the company has established a strong framework to ensure adequate governance over the identification, prevention and mitigation of environmental and social risks associated with its eligible projects.

### Section 3: Impact of Use of Proceeds

Both use of proceeds categories are recognized as impactful by the GBP and the GLP.

#### Impact of recycled asphalt and construction waste on waste reduction and GHG emissions reduction

PORR intends to use part of the green bond proceeds to invest in recycling facilities for asphalt and construction waste. Construction and demolition waste (CDW) accounts for 25-30% of all waste generated in the EU, with an increase of 26% in the amount of CDW in Austria between 2010 and 2013,<sup>9</sup> indicating the impact of reducing CDW in waste prevention. Moreover, the EU Waste Framework Directive (2008/98/EC) sets the goals to recycle 70% of non-hazardous CDW by 2020.<sup>10</sup> The level of CDW recycling in the EU varies between 10% and 90% across member states.<sup>11</sup> While some construction waste can contain hazardous materials, which can hamper recyclability, asphalt is fully recyclable. However, the use of recycled inputs is limited by the properties required for the final material, and thus restricted to 20-30% for recycled asphalt<sup>12</sup> and 30% for recycled concrete to achieve properties similar to the raw material.<sup>13</sup>

PORR uses up to 20% of recycled material in its asphalt mix and 15-30% in its concrete mix, indicating the efforts of the company to use recycled materials in its products.<sup>14</sup> Given the importance of CDW in waste prevention, Sustainalytics considers that PORR's investment in recycling facilities will contribute to EU waste management goals.

In addition, studies indicate a 32-61% CO<sub>2</sub> savings potential from recycled asphalt compared to the carbon footprint of asphalt based on virgin materials,<sup>15</sup> depending on moisture and amount of recycled content among others.<sup>16</sup> The CO<sub>2</sub> savings stem from avoided energy required to obtain aggregate virgin materials (stone, sand, gravel, oil), transport and the production of asphalt binder.<sup>17,18</sup> While asphalt provides a supportive role for road-building and the transportation sector, Sustainalytics is of the opinion that recycled asphalt does not represent a lock-in product for carbon-intensive mobility. Given the lack of viable alternatives

<sup>9</sup> [http://ec.europa.eu/environment/waste/studies/deliverables/CDW\\_Austria\\_Factsheet\\_Final.pdf](http://ec.europa.eu/environment/waste/studies/deliverables/CDW_Austria_Factsheet_Final.pdf)

<sup>10</sup> European Commission, Directive 2008/98/EC on waste (Waste Framework Directive): <http://ec.europa.eu/environment/waste/framework/>

<sup>11</sup> European Commission, Waste, Construction and Demolition Waste (CDW), website last updated August 2018:

[http://ec.europa.eu/environment/waste/construction\\_demolition.htm](http://ec.europa.eu/environment/waste/construction_demolition.htm)

<sup>12</sup> <https://circulatenews.org/2016/02/asphalt-recycling-breakthroughs-minimize-solid-waste/>

<sup>13</sup> America's Cement Manufacturer's, Recycled Aggregates, accessed December 2018: <https://www.cement.org/learn/concrete-technology/concrete-design-production/recycled-aggregates>

<sup>14</sup> The recycling rates have been provided by PORR AG.

<sup>15</sup> Pavement Recyclers, document available at: <http://pavementrecyclers.com/wp-content/uploads/2016/09/GreenhouseGasStudy.pdf>

<sup>16</sup> <https://www.dot.ny.gov/divisions/engineering/technical-services/trans-r-and-d-repository/C-08-02%20Final%20Report%209-8-09.pdf>

<sup>17</sup> Although accounting for around 5% of the hot mix asphalt (HMA) composition, binder production is the most energy intensive component in the HMA production process, and therefore accounts for the largest carbon reduction instrument in the manufacturing of recycled asphalt.

<sup>18</sup> Documentation for Greenhouse Gas Emission and Energy Factors Used in the Waste Reduction Model (WARM) from the US Environmental Protection Agency, document available at: [https://www.epa.gov/sites/production/files/2016-03/documents/warm\\_v14\\_construction\\_demolition\\_materials.pdf](https://www.epa.gov/sites/production/files/2016-03/documents/warm_v14_construction_demolition_materials.pdf)

for asphalt and the CO<sub>2</sub> savings potential, Sustainalytics is of the opinion that the recycling of asphalt can contribute to GHG emission reductions in the EU.

#### Contribution of green buildings towards Austria's climate commitments

PORR intends to use the green bond proceeds to finance the acquisition and construction and refurbishment of green buildings in Austria as well as measures to improve environmental and energy performance of its premises. Austria set a national target to reduce its GHG emissions by 16% by 2020 compared to the 2005 baseline year and followed an EU-wide GHG emissions target to reduce its carbon footprint by 40% by 2030 compared to 1990 levels, as part the country's Nationally Determined Contribution (NDC) to the Paris Climate Agreement.<sup>19</sup> The countries GHG emission strategy focuses on the transport and buildings sector, as they have the greatest reduction potential,<sup>20</sup> indicating the importance of buildings and activities within the building sector to reduce GHG emissions. Moreover, in the EU buildings contribute about 40% of overall energy consumption and 36% of GHG emissions.<sup>21</sup>

Given the importance of buildings in the reduction of energy use and GHG emissions, Sustainalytics is of the opinion that PORR's investment in green buildings and energy efficiency improvements have the potential to contribute to the countries GHG emission targets.

In addition, to assess the top 15% of commercial buildings regarding energy performance/ CO<sub>2</sub> intensity, PORR applies a methodology that uses proxies related to the energy performance of all Austrian buildings (including both residential and commercial buildings) related to the building year and relevant building codes. Eligible are all office buildings with at least energy efficiency class "A" according to the Austrian energy performance certificate (OIB RL 6 2015) or a CO<sub>2</sub> intensity ≤ 30 kg CO<sub>2e</sub> / m<sup>2</sup> annually as nearly zero energy building according to OIB RL 6 : 2015.<sup>22</sup> The methodology was verified by an independent third party. While the assessment acknowledges that the data basis in Austria is not fully eligible to carry out a benchmark defining the Top 15% of office buildings according to by CBI requirements, the assessment concluded that the chosen approach is plausible and valid, and that the calculation method of the emission target complies with the CBI requirement for near zero energy buildings. The full methodology is disclosed in Appendix 2.

#### 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 green bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Green Buildings	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency
	9. Industry, Innovation and Infrastructure	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
Pollution Prevention & Control	11. Sustainable Cities and Communities	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
	12. Responsible Consumption and Production	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

<sup>19</sup> Information retrieved from the International Energy Agency available at: <https://www.iea.org/policiesandmeasures/pams/austria/name-156362-en.php?s=dHlwZT1jYyZzdGF0dXM9T2s,&return=PG5hdiBpZD0iYnJlYWRjcnVtYiil-PGEgaHJlZj0iLyl-SG9tZTwwYT4gJnJhcXVvOyA8YSBocmVmPSlvcG9saWNpZXNhbmRtZWZzdXJlcy8iPiBvbjGljaWVzIGFuZCBNZWFzdXJlcwvYT4gJnJhcXVvOyA8YSBocmVmPSlvcG9saWNpZXNhbmRtZWZzdXJlcy9jbGltYXRlY2hhbmdlLyl-Q2xpbWF0ZSBDaGFuZ2U8L2E-PC9uYXY->

<sup>20</sup> Austrian Energy Agency, Energy efficiency trends and policies in Austria, June 2018: <http://www.odyssee-mure.eu/publications/national-reports/energy-efficiency-austria.pdf>

<sup>21</sup> European Commission, Energy, accessed December 2018: <https://ec.europa.eu/energy/en/topics/energy-efficiency/buildings>

<sup>22</sup> OIB RL 6 : 2015: [https://www.oib.or.at/sites/default/files/richtlinie\\_6\\_26.03.15.pdf](https://www.oib.or.at/sites/default/files/richtlinie_6_26.03.15.pdf) , retrieved on 17.11.2018

## Conclusion

PORR developed the PORR Green Finance Framework to issue green bonds, green Schuldscheindarlehen and green loans to finance and refinance acquisition, OPEX and CAPEX investment costs related to (i) Green Buildings and (ii) Pollution Prevention and Control. Sustainalytics conducted an assessment of the framework and found that the use of proceeds categories align with those recognized by the Green Bond Principles 2018 and Green Loan Principles 2018.

In addition, Sustainalytics considers that the financing of recycling facilities, green buildings, and measures to improve the environmental performance of its premises will contribute to EU waste management goals and GHG emission targets. PORR's processes for project evaluation and selection, management of proceeds, allocation reporting and impact reporting are aligned with market practices. Sustainalytics highlights that the methodology to identify green commercial buildings was assessed as valid and plausible by an independent external subject matter expert.

Based on the above, Sustainalytics considers the PORR Green Finance Framework to be robust, credible and transparent.






## Appendices

### Appendix 1: Green Buildings Certifications

	<b>LEED</b>	<b>BREEAM</b>	<b>DGNB/OGNI/SGNI</b>
Background	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.	The German, Austrian and Swiss Green Building Certification(s) or DGNB was developed in 2007 by the non-profit German Sustainable Building Council in partnership with the German Federal Ministry of Transport, Building, and Urban Affairs in order to actively encourage sustainable building.
Certification levels	Certified Silver Gold Platinum	Pass Good Very Good Excellent Outstanding	Bronze Silver Gold Platinum
Areas of Assessment: Environmental Project Management	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.	Technically, any project can be applied anywhere in the world through a tailored process of making appropriate local adaptations on a case-by-case basis.
Areas of Assessment: Environmental Performance of the Building	<ul style="list-style-type: none"> <li>• Energy and atmosphere</li> <li>• Sustainable Sites</li> <li>• Location and Transportation</li> <li>• Materials and resources</li> <li>• Water efficiency</li> <li>• Indoor environmental quality</li> <li>• Innovation in Design</li> <li>• Regional Priority</li> </ul>	<ul style="list-style-type: none"> <li>• Energy</li> <li>• Land Use and Ecology</li> <li>• Pollution</li> <li>• Transport</li> <li>• Materials</li> <li>• Water</li> <li>• Waste</li> <li>• Health and Wellbeing</li> <li>• Innovation</li> </ul>	<ul style="list-style-type: none"> <li>• Environment</li> <li>• Economic</li> <li>• Sociocultural and functional aspects</li> <li>• Technology</li> <li>• Processes Site</li> </ul>
Requirements	Prerequisites (independent of level of certification) + Credits with associated points.  These points are then added together to obtain the LEED level of certification.	Prerequisites depending on the levels of certification + Credits with associated points.  This number of points is then weighted by item39 and gives a BREEAM level of certification, which is based on the overall score	Percentage-based performance index  The total performance index (expressed as a percentage) is calculated by adding the six key areas of assessment. The environmental, economic, socio-cultural and



	<p>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 Construction and Major Renovations, Existing Buildings: Operation and Maintenance).</p>	<p>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.</p> <p>BREAAAM has two stages/ audit reports: a 'BREEAM Design Stage' and a 'Post Construction Stage', with different assessment criteria.</p>	<p>functional aspects and technical quality each account for 22.5% of the total, process accounts for 10% and the site quality is given a separate grade.</p> <p>Depending on the total performance index, a DGNB award will be given to the project, starting from Silver (at least 50%), then Gold (at least 65%) and finally Platinum (at least 80%). Bronze is awarded for already existing buildings and is conferred as the lowest rank with a total performance index of at least 35%.</p>
Performance Display			
Accreditation	<p>LEED AP BD+C LEED AP O+M</p>	<p>BREEAM International Assessor BREEAM AP BREEAM In Use Assessor</p>	<p>DGNB Auditor DGNB Compliance Testing Team DGNB Certification Committee</p>
Qualitative considerations	<p>Widely recognized internationally, and strong assurance of overall quality.</p>	<p>Used in more than 70 countries: Good adaptation to the local normative context. Predominant environmental focus. BREEAM certification is less strict (fewer minimum thresholds) than HQE and LEED certifications.</p>	<p>DGNB certification is based on current European Union standards and norms and is being recommended by the German Federal Ministry of Transport, Building and Urban Development. DGNB System has partnerships in a number of countries, among which Bulgaria, Denmark, Austria, Thailand and Switzerland.</p>

## Appendix 2: Green Commercial Buildings Methodology

### PORR AGs Green Bond Assessment Methodology Buildings Austria referring to CBI

#### 1. Background

The Climate Bonds Initiative (CBI) is an international organisation based in the UK. Its aim is to mobilize the large capital bond market for climate change solutions. It promotes investment in projects and assets necessary for a rapid transition to a low carbon and climate resilient economy. The Climate Bonds Standard and Certification Scheme is a FairTrade-like labeling scheme for bonds. It is used globally by bond issuers, governments, investors and the financial markets to prioritise investments, which contribute to addressing climate change.

The Climate Bond Initiative (CBI) describes three options for certifying a Commercial Building under the sector specific Criteria for Low Carbon Buildings.<sup>23</sup> Which option the issuer can choose depends on the geographical location of the buildings and the related data available.

**Path 1 – Low Carbon Trajectory available:** This first approach may be chosen if there has been or can be a low carbon trajectory established for the local market. If the issuer can demonstrate that the portfolio of assets is aligned with the trajectory, the bond can achieve Climate Bonds Certification. For some countries, there are location-specific criteria for commercial buildings in the form of trajectories available on the CBI website. For Austria this is not the case.

**Path 2 – Proxy:** Many cities may not have the appropriate building-related data required to establish the low carbon trajectory. For these cities, the low carbon buildings criteria offers an interim solution for certification, by using an approved proxy. This proxy has to be developed by the bond issuer, based on available market data. The CBI describes a number of criteria<sup>24</sup> to be met by the chosen methodology and the underlying data.

**Path 3 – Upgrade:** Bonds are issued for a range of financing and refinancing. The low carbon buildings criteria also cover buildings assets that achieve significant upgrades to their emissions intensity performance. These buildings must achieve carbon reduction target of at least 30%.

In the following, the Assessment Methodology of PORR is compared with the three paths presented by the CBI with regard to plausibility and applicability of the sources used as well as the assumptions made.

#### 2.1. Path 1

For Austria, there are no concrete trajectories available. Therefore, Path 1 of the CBI framework is not an option.

#### 2.2. Path 2

Due to the lack of an existing trajectory for Austria (i.e. Path 1), PORR has decided to establish a proxy.

##### 2.2.1 Calculation of Top 15% of the market

The aim of PORR's first building selection at the end of 2018 is to develop an easy-to-use yet reliable evaluation methodology with a limited amount of data.

In a first step, this requires to determine the baseline, which consists of the Top 15% most energy-efficient buildings in a local market. This can be based either on a raw data set of individual building emissions performance representing the Top 15% of the local market or statistical results from a local market survey.

##### a) Local market

The local market is not clearly defined by PORR. They state, that the methodology concentrates on office buildings, mainly in Austria.

The CBI document on emission performance trajectories, clearly states that emission performance trajectories are different for each city and each building type (e.g. offices, hotels, shopping centers).<sup>25</sup>

<sup>23</sup> <https://www.climatebonds.net/standard/buildings/commercial>

<sup>24</sup> <https://www.climatebonds.net/files/files/Methodology%20for%20Establishing%20Proxies.pdf>

<sup>25</sup> <https://www.climatebonds.net/files/files/Commercial%20Buildings%20Emissions%20Trajectories.pdf>

Our research has shown that the legislation in the federal states regarding the energy efficiency of new buildings can vary, but since 2009 a minimum standard according to OIB has been set. This enables us to confirm that, despite the lack of data, it can be assumed that there is a similar overall energy efficiency for buildings at different locations in Austria. If buildings from other countries were to be included in the Green Bond portfolio, corresponding baselines would have to be determined for the respective country.

#### b) Database

CBI describes two methods in the "Methodology for establishing (Non-Residential & Residential) building proxies":<sup>26</sup> Benchmarking against local market emissions performance and proportion of total ratings/labels awarded.

Since there is no raw data available for the carbon efficiency of commercial buildings in Austria, PORR uses an alternative method to determine the Top 15% of the local market. According to this method, the CO<sub>2</sub> intensity of PORR Green Bonds initial building selection is defined as a function of the national building energy efficiency legislation of the year of construction, without knowing the actual energy consumption.

The study „Energieflüsse in Bürogebäuden – (NEWID – IST)“ of Stadt Wien, MA20 – Energieplanung from the year 2014,<sup>27</sup> which contains information on the average, specific energy consumption of office buildings built between 2000 and 2009, is used for this purpose.

Based on a secondary source<sup>28</sup> of the study, the following average specific energy consumption of office buildings in Vienna is assumed:

Electricity	72,2 kWh/m <sup>2</sup> a
Natural gas	14,9 kWh/m <sup>2</sup> a
District heating	60,9 kWh/m <sup>2</sup> a

The OIB RL 6: 2015<sup>29</sup> specifies conversion factors for determining the CO<sub>2</sub> emissions for each energy source. These are used to determine the CO<sub>2</sub> intensity of the reference office buildings:

Average, specific power consumption	fCO <sub>2</sub>	Average, specific CO <sub>2</sub> intensity
<b>Electricity</b> 72.20 kWh/m <sup>2</sup> <sub>BGFa</sub> a	276 gCO <sub>2e</sub> /kWh	19.93 kg CO <sub>2e</sub> /m <sup>2</sup> <sub>BGFa</sub> a
Heat natural gas 14.90 kWh/m <sup>2</sup> <sub>BGFa</sub> a	236 gCO <sub>2e</sub> /kWh	3.52 kg CO <sub>2e</sub> /m <sup>2</sup> <sub>BGFa</sub> a
Heat district heating 60.90 kWh/m <sup>2</sup> <sub>BGFa</sub> a	291 gCO <sub>2e</sub> /kWh	17.72 kg CO <sub>2e</sub> /m <sup>2</sup> <sub>BGFa</sub> a
<b>Heat sum</b> 75.85 kWh/m <sup>2</sup> <sub>BGFa</sub> a	<b>Sum</b>	<b>41.17 kg CO<sub>2e</sub>/m<sup>2</sup><sub>BGFa</sub> a</b>

Table 2: calculation of CO<sub>2</sub> intensity for reference office buildings

The study results also show the relationship between increasing energy efficiency the later the office buildings were constructed. The study evaluates office buildings up to the year of construction 2009. Between the construction year categories 1990-1999 and >2000 the improvement was about 24%.

Year of construction	Average heat consumption
>2000	71,3 kWh/m <sup>2</sup> a
1990 – 1999	93,3 kWh/m <sup>2</sup> a
All buildings	82,9 kWh/m <sup>2</sup> a

Table 3: relationship between increasing energy efficiency and year of construction<sup>30</sup>

A register count of Statistic Austria "Gebäude 2011 nach überwiegender Gebäudeeigenschaft, Errichtungsjahr und Bundesland" <sup>11</sup> is used, to show the building distribution by building age.

Number of buildings in Austria	2.191.280	100%
--------------------------------	-----------	------

<sup>26</sup> <https://www.climatebonds.net/files/files/Methodology%20for%20Establishing%20Proxies.pdf>

<sup>27</sup> [https://www.oegut.at/downloads/pdf/e\\_newid-endbericht.pdf](https://www.oegut.at/downloads/pdf/e_newid-endbericht.pdf)

<sup>28</sup> CEBRE (2013): CBRE Global Research and Consulting, Marktbericht Wiener Büroflächen, Q3 2013. Wien. At.

<sup>29</sup> [https://www.oib.or.at/sites/default/files/richtlinie\\_6\\_26.03.15.pdf](https://www.oib.or.at/sites/default/files/richtlinie_6_26.03.15.pdf)

<sup>30</sup> [https://www.oegut.at/downloads/pdf/e\\_newid-endbericht.pdf](https://www.oegut.at/downloads/pdf/e_newid-endbericht.pdf)

Number of office buildings in Austria	35.420	1,62%
Number of new buildings (> 2001)	276.499	12,62

Table 4: register count 2011 of Statistic Austria<sup>31</sup>

Under the assumption that energy efficiency increases with the year of construction and due to the low new construction rate of office buildings, PORR concludes that all office buildings built after 2009 belong to the Top 15% of Austrian office buildings.

Since there is no data available for office buildings built after 2009 and to additionally create a safety buffer, PORR chose to assume a 30% improvement of the specific energy consumption of office buildings constructed after 2009 compared to an average building of the year 2000-2009 (as described in the study of Stadt Wien, MA 20).

Based on the values in table 2, an improvement of 30% results in a heat requirement of 53,06 kWh/m<sup>2</sup>a. Since this value is close to the required heating demand of the OIB RL 6: 2015 for buildings certified with energy efficiency class <B, the respective limit of 50 kWh/m<sup>2</sup>a is used by PORR for further calculations.

In order to calculate the electricity consumption improvement, the original ratio between heat and electricity consumption is used. It is assumed that, electricity represents 48,78% of the total specific energy consumption or 95,25% of the heat consumption. Based on that the electricity improvement is estimated with 47,62 kWh/m<sup>2</sup>a (50k kWh/m<sup>2</sup>a heat x 95,25%)

Additionally a water heating demand of 4.71 kWh/m<sup>2</sup>a is derived from ÖNORM H5056 (OIB RL 6:2015).

These values are again multiplied with the emission conversion factors from OIB RL 6:2015 in order to achieve the total estimated carbon intensity of an average building constructed after 2009. Since there is no measured data on actual energy consumption for buildings under construction or planning, energy efficiency is assessed by the theoretical energy requirement, the Energy Performance Certificate.

Average, specific power consumption		fCO <sub>2</sub>	Average, specific CO <sub>2</sub> intensity
Electricity	47.63 kWh/m <sup>2</sup> <sub>BGFa</sub> a	276 gCO <sub>2e</sub> /kWh	13.14 kg CO <sub>2e</sub> /m <sup>2</sup> <sub>BGFa</sub> a
Heat natural gas	9.83 kWh/m <sup>2</sup> <sub>BGFa</sub> a	236 gCO <sub>2e</sub> /kWh	2.32 kg CO <sub>2e</sub> /m <sup>2</sup> <sub>BGFa</sub> a
Heat district heating	40.17 kWh/m <sup>2</sup> <sub>BGFa</sub> a	291 gCO <sub>2e</sub> /kWh	11.69 kg CO <sub>2e</sub> /m <sup>2</sup> <sub>BGFa</sub> a
Heat sum	50.00 kWh/m <sup>2</sup> <sub>BGFa</sub> a		
Hot water natural gas	0.93 kWh/m <sup>2</sup> <sub>BGFa</sub> a	236 gCO <sub>2e</sub> /kWh	0.22 kg CO <sub>2e</sub> /m <sup>2</sup> <sub>BGFa</sub> a
Hot water district heating	3.78 kWh/m <sup>2</sup> <sub>BGFa</sub> a	291 gCO <sub>2e</sub> /kWh	1.10 kg CO <sub>2e</sub> /m <sup>2</sup> <sub>BGFa</sub> a
Hot water sum	4.71 kWh/m <sup>2</sup> <sub>BGFa</sub> a		
		<b>resulting demand value</b>	<b>28.47 kg CO<sub>2e</sub>/m<sup>2</sup><sub>BGFa</sub> a</b>

Table 5: calculation of CO<sub>2</sub> intensity for office buildings after 2009

This approach is chosen to determine the threshold for the Top 15% and to avoid buildings of this building age group with a significantly higher energy demand in the bond.

### c) Assumptions

Due to the missing raw data basis, instead of the actual calculation of the Top 15%, PORR makes the following assumptions to determine the Top 15% of the local building standard:

- ☒ Assumption 1: Energy efficiency increases with the year of construction
- ☒ Assumption 2: All new office buildings from 2009 correspond to the Top 15%
- ☒ Assumption 3: 30% improvement in energy efficiency between 2000-2009 and > 2009

#### Assumption 1

The assumption that the energy performance of buildings has generally increased with the year of construction can be confirmed by other sources.<sup>32,33</sup>

Table 15.1-3: HWB des Beispielgebäudes Nichtwohngebäude

<sup>31</sup> [https://www.statistik.at/web\\_de/statistiken/menschen\\_und\\_gesellschaft/wohnen/wohnungs\\_und\\_gebaeudebestand/Gebaeude/index.html](https://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/wohnen/wohnungs_und_gebaeudebestand/Gebaeude/index.html)

<sup>32</sup> [https://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA\\_2016\\_IL\\_172/COO\\_2026\\_100\\_2\\_1241958.pdf](https://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA_2016_IL_172/COO_2026_100_2_1241958.pdf)

<sup>33</sup> [https://www.wifo.ac.at/jart/prj3/wifo/resources/person\\_dokument/person\\_dokument.jart?publikationsid=33962&mime\\_type=application/pdf](https://www.wifo.ac.at/jart/prj3/wifo/resources/person_dokument/person_dokument.jart?publikationsid=33962&mime_type=application/pdf)

	Pro Jahr [ kWh/a ]	Flächen-spezifisch [ kWh/m²a ]	Volumens-spezifisch [ kWh/m³a ]
Altbau (bis 1919)	325.000	133	32
Bestand (1919-2000)	188.000	110	27
Bestand (ab 2001)	74.000	43	11

Table 6: heating demand of a non-residential sample building by year of construction<sup>34</sup>

Übersicht 3 3: Energieeinsparpotentiale bei Bürogebäuden, Referenzgröße 3.522 m²

Bauperiode	Baseline			Sanierungsvarianten:						Sanierungskosten		
	HWB <sup>1)</sup>		Energiekosten	Heizwärmebedarf - Einsparung						Nutzungsdauer: 25 Jahre		
	in kWh/m².a	in €/MWh		BauO <sup>2)</sup>	NESI <sup>3)</sup>		PHSI <sup>4)</sup>		BauO <sup>2)</sup>	NESI <sup>3)</sup>	PHSI <sup>4)</sup>	
<b>vor 1900</b>												
Referenzstandort	120	14,3	1,7	76,0	63	96,0	80	103,0	86	23,6	27,2	30,8
<b>1900 bis 1945</b>												
Referenzstandort	110	14,3	1,6	66,0	60	86,0	78	93,0	85	23,6	27,2	30,8
<b>1945 bis 1960</b>												
Referenzstandort	128	27,0	3,5	84,0	66	104,0	81	111,0	87	23,6	27,2	30,8
<b>1961 bis 1980</b>												
Referenzstandort	107	15,4	1,7	63,0	59	83,0	78	90,0	84	23,6	27,2	30,8
<b>nach 1980</b>												
Referenzstandort	73	15,4	1,1	29,0	40	49,0	67	56,0	77	23,6	27,2	30,8

Q: Statistik Austria, OIB-LF 6, eigene Berechnungen. - <sup>1)</sup>Heizwärmebedarf. <sup>2)</sup>Bauordnung. <sup>3)</sup>Niedrigenergiestandard. <sup>4)</sup>Passivhausstandard.

Table 7: heating demand of office sample buildings by year of construction<sup>35</sup>

**Assumption 2**

The estimation of the proportion of new office buildings is based on the total stock of Austrian buildings in 2011,<sup>36</sup> which includes both residential and non-residential buildings. The new construction rate after 2001 is 12,62% for all buildings. Since only 35.420 office buildings are listed in the 2011 portfolio (1,62% of all buildings), the new construction rate for office buildings is very low as a percentage of the total building stock. We recommend to calculate the new construction rate of office buildings directly on the basis of the number of office buildings. The relation to the local market (office buildings) would be more concretely represented in this way. The starting point for this would be the office building stock for 2011 (35.420). 4.392 office buildings were constructed in 2001 and later, which corresponds to a new construction rate of 12,4%. In addition, the approach by PORR described above does not take account of restructuring and renovating measures.

**Assumption 3**

Based on the assumption that the year of construction is a reliable criterion for the selection methodology of the Top 15% of Austrian office buildings PORR transfers the average existing Viennese building (according to the study used) into the current building law. PORR assumes a heating requirement of 50 kWh/m²a, which corresponds to the requirements of the OIB RL 6:2015 for Energy Efficiency Class B. The resulting demand value 28,47 kg CO<sub>2</sub>e/m²BGFa forms the baseline for the further emission performance target.

PORR cites an improvement of heat consumption of buildings between the construction year categories 1990-1999 and 2000-2009 of about 24%<sup>37</sup> (table 3). Compared to the current building law, an improvement of 34% is assumed >2009.

The calculation methodology applied by PORR seems plausible in the sense that the energy efficiency performance increases with the year of construction, but is not verifiable based on existing data.

**2.2.2 Development of emissions performance target**

The next step of path 2 would require to develop an emissions performance target based on the Top 15% of the local market. This target is based on the year of the bond issuance as well as the year when the bond

<sup>34</sup> [https://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA\\_2016\\_II\\_172/COO\\_2026\\_100\\_2\\_1241958.pdf](https://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA_2016_II_172/COO_2026_100_2_1241958.pdf) sig

<sup>35</sup> [https://www.wifo.ac.at/jart/prj3/wifo/resources/person\\_dokument/person\\_dokument.jart?publikationsid=33962&mime\\_type=application/pdf](https://www.wifo.ac.at/jart/prj3/wifo/resources/person_dokument/person_dokument.jart?publikationsid=33962&mime_type=application/pdf)

<sup>36</sup> [https://www.statistik.at/web\\_de/statistiken/menschen\\_und\\_gesellschaft/wohnen/wohnungs\\_und\\_gebaeudebestand/Gebaeude/index.html](https://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/wohnen/wohnungs_und_gebaeudebestand/Gebaeude/index.html)

<sup>37</sup> [https://www.oegut.at/downloads/pdf/e\\_newid-endbericht.pdf](https://www.oegut.at/downloads/pdf/e_newid-endbericht.pdf)

matures. The mid-point of the bond’s term is defined as the carbon intensity target for assets selected in the year of the bond issuance<sup>38</sup> (as illustrated in the example below).

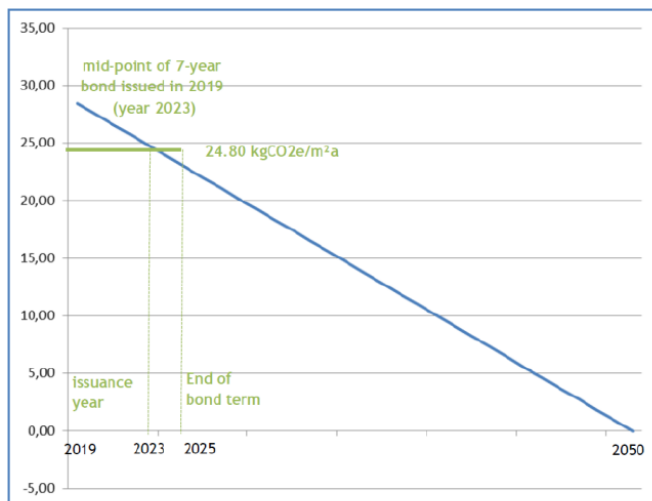


Figure 1: emissions performance target PORR

Following this path PORR determines the baseline with 28,47 kg CO<sub>2</sub>e/m<sup>2</sup>BGFa and defines the carbon intensity target with an average maturity of the bond after 7 years in 2025.

The midpoint of the 7-year bond issued in 2019 (2023) sets the emission performance target of 24,80 kg CO<sub>2</sub>e/m<sup>2</sup>BGFa, rounded up 25 CO<sub>2</sub>e/m<sup>2</sup>BGFa.

PORR therefore sets the emission performance target of 25 CO<sub>2</sub>e/m<sup>2</sup>BGFa and thus also corresponds to the certification system for sustainability in building construction ÖGNI<sup>39</sup> for the new construction of Austrian office and administration buildings, which defines a requirement value for the use phase of buildings of 25,64 CO<sub>2</sub>e/m<sup>2</sup>a.

Since OIB uses the Austrian electricity mix incl. net imports as a basis for the conversion factors instead of the Austrian production mix, we recommend to use a certification that also uses the electricity mix (e.g klima:aktiv certification) in order to continue a consistent approach.

	GWP	ODP	POCP	AP	EP	PE <sub>NE</sub>	PE <sub>GES</sub>
	kg CO <sub>2</sub> -Äqu./ (m <sup>2</sup> -a)	kg R11-Äqu./ (m <sup>2</sup> -a)	kg C <sub>3</sub> H <sub>8</sub> -Äqu./ (m <sup>2</sup> -a)	kg SO <sub>2</sub> -Äqu./ (m <sup>2</sup> -a)	kg PO <sub>4</sub> <sup>3-</sup> -Äqu./ (m <sup>2</sup> -a)	kWh/(m <sup>2</sup> -a)	kWh/(m <sup>2</sup> -a)
N	8,16	2,126 E-08	0,001068	0,01165	0,001278	24,75	48,51
α	18,32	4,622 E-08	0,002393	0,02603	0,002883	55,68	91,81
σ	<b>25,64</b>	6,470 E-08	0,003350	0,03644	0,004037	77,95	128,54

Table 8: benchmarks for the ÖGNI criteria emission-related environmental impacts and resource consumption

Limit value (G), reference value (R) and target value (Z) for the energy demand of building use  
 The emissions performance target also corresponds to the Austrian definition of near-zero energy buildings. Under the current ‘Energy performance of buildings’ Directive, all new buildings must be nearly zero-energy buildings by 31 December 2020. OIB defines nearly zero-energy buildings for office buildings with the following requirements:<sup>40</sup>

<sup>38</sup> <https://www.climatebonds.net/standard/buildings/commercial/calculator/illustration>

<sup>39</sup> ÖGNI (2017): Ökobilanz – Emissionsbedingte Umweltwirkungen und Ressourcenverbrauch – spezifischer Teil. Nutzungsprofil Neubau Büro- und Verwaltungsgebäude 2017

<sup>40</sup> [https://www.oib.or.at/sites/default/files/nationaler\\_plan.pdf](https://www.oib.or.at/sites/default/files/nationaler_plan.pdf)



	HWB <sub>max</sub> [kWh/m <sup>2</sup> a]	EEB <sub>max</sub> [kWh/m <sup>2</sup> a]	f <sub>GEE,max</sub> [-]	PEB <sub>max</sub> [kWh/m <sup>2</sup> a]	CO <sub>2,max</sub> [kg/m <sup>2</sup> a]
2014	$5,50 \times (1 + 3,0 / t_c)$	mittels HTEB <sub>Ref</sub>		230	36
2016	$4,67 \times (1 + 3,0 / t_c)$	mittels HTEB <sub>Ref</sub>		210	33
	$5,50 \times (1 + 3,0 / t_c)$	oder	f <sub>GEE,DLGneu,max</sub>		
2018	$4,00 \times (1 + 3,0 / t_c)$	mittels HTEB <sub>Ref</sub>		190	30
	$5,50 \times (1 + 3,0 / t_c)$	oder	f <sub>GEE,DLGneu,max</sub>		
2020	$3,33 \times (1 + 3,0 / t_c)$	mittels HTEB <sub>Ref</sub>		170	27
	$5,50 \times (1 + 3,0 / t_c)$	oder	f <sub>GEE,DLGneu,max</sub>		
f <sub>GEE,DLGneu,max</sub> ... Diese Werte ergeben sich jeweils aus der strengeren HWB-Anforderung und der Anwendung der Referenzausstattungen.					

Table 8: minimum energy performance requirements for new office buildings (2014-2020)<sup>41</sup>

### 2.3 Path 3 / Selection of future buildings

After the first issue of the Green Bond based on the first building selection, PORR intends to gradually increase the volume of the Green Bond. The building portfolio financed by PORR is designed to be constantly changing, financing agreements expire and new ones will be concluded. In order to be able to allocate newly financed office buildings in Austria to the Green Bond in future, PORR defines a maximum allowable CO<sub>2</sub> intensity of 25 kg CO<sub>2</sub>e/m<sup>2</sup>BGFa for these new buildings.

This limit is based on the calculations described above in Path 2.

PORR describes that the valuation methodology will be supplemented by the actual energy consumption measured for existing buildings. This should also make it possible to include other buildings from the PORR portfolio with a construction or renovation year prior to 2009 in the Green Bond.

In addition to the CO<sub>2</sub> intensity limit of 25 kg CO<sub>2</sub>e/m<sup>2</sup>BGFa, PORR defines the following quality characteristics for future buildings:

1. A CO<sub>2</sub> intensity of  $\leq 25$  kg CO<sub>2</sub>e/m<sup>2</sup>a as nearly zero-energy building according to OIB<sup>42</sup>
2. Certification with one of the following standards

- DGNB family (DGNB, ÖGNI, SGNI) in min. gold
- LEED in min. gold
- BREEAM in excellent

This methodology partly covers the approach described by the CBI, where buildings must achieve a LEED Gold or Platinum certification, with an improvement of 30% against the ASHRAE 90.1 criteria or equivalent performance ratings under other building standards. In order to calculate a 30% improvement against ASHRAE 90.1, it is necessary to develop a modelled reference building that represents average consumption data for every single asset chosen.

Since ASHRAE 90.1 and LEED have both been developed for the US American market and building standards in Austria are higher in an international comparison (see chapter 1.1.). Hence, the certification by LEED with a 30% improvement compared to the ASHRAE does not represent an ambitious goal for decarbonisation in Austria.

For this reason, PORR extends the Green Bond directly to newly built or existing buildings with a maximum allowable CO<sub>2</sub> intensity of 25 kg CO<sub>2</sub>e/m<sup>2</sup>a and uses national and international certifications in order to comply with the "Green Bond Principles – Voluntary Process Guidelines for Issuing Green Bonds – June 2018".

## Appendix 3: Green Bond / Green Bond Programme - External Review Form

### Section 1. Basic Information

<sup>41</sup> [https://www.oib.or.at/sites/default/files/nationaler\\_plan.pdf](https://www.oib.or.at/sites/default/files/nationaler_plan.pdf)

<sup>42</sup> [https://www.oib.or.at/sites/default/files/nationaler\\_plan.pdf](https://www.oib.or.at/sites/default/files/nationaler_plan.pdf)



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**Issuer name:** PORR AG

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

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**Review provider's name:** Sustainalytics

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**Completion date of this form:** December 2018

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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

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 eligible categories for the use of proceeds are aligned with those recognized by the Green Bond Principles and Green Loan Principles. Sustainalytics considers that the financing of (i) Green Buildings and (ii) Pollution Prevention and Control will contribute the recycling of materials and GHG emission reduction as well as advance UN Sustainable Development Goals 7, 9, 11 and 12. The framework will be used for green bonds, green SSDs (Schuldscheindarlehen) and loans. PORR does not disclose a lookback period for refinancing but confirmed to Sustainalytics that loans of the financed green buildings are not older than 2-3 years. In addition, the company commits to disclosing the amount of existing and new projects in its annual reporting. Sustainalytics recognizes that the use of proceeds may be allocated to OPEX (operational expenditures) that is specific to for recycling facilities. Given the nature of the projects, Sustainalytics believes that OPEX will be important to maintain projects and will contribute to sustaining positive environmental impacts. Sustainalytics welcomes that PORR identified OPEX expenditure and that it tracks OPEX project-by-project.

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

- |                                                                                                                                                    |                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <input 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 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:

### 2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section *(if applicable)*:

PORR's internal process in evaluating and selecting projects is aligned with market practice. PORR's Green Finance Committee comprised of members from Corporate Social Responsibility and Sustainability, Risk, Accounting, Investor Relations and other parties, will be responsible for project selection and evaluation.

#### 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 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 checked="" type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other ( <i>please specify</i> ):                                                      |                                                         |

### 3. MANAGEMENT OF PROCEEDS

Overall comment on section (*if applicable*):

PORR's processes for management of proceeds is aligned with market practice. PORR has systems in place to track the use of proceeds using its Treasury system and separate. Unallocated proceeds will be allocated in PORR's treasury liquidity portfolio (in cash or cash equivalents, money market funds, amongst others).

#### 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 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):

PORR's allocation reporting aligns with market practice. The company commits to report on the allocation of proceeds on its website on an annual basis until full allocation, including allocation of proceeds per eligible category, existing and new project expenditure and amount of unallocated proceeds. Regarding impact reporting, PORR is committed to reporting on impact in its Sustainability Report or specific Impact Report. Indicators include estimated annual energy consumption of green buildings, estimated

avoided carbon emissions (in tCO<sub>2</sub> eq), sustainable labels and certificates of green buildings, volume of construction material recycled, and prevented CO<sub>2</sub> emissions from recycled material (in tCO<sub>2</sub> eq). The impact reporting may also be supplemented with case studies on specific projects. In Sustainalytics' view reporting on these metrics is in line 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 type="checkbox"/> Other ( <i>please specify</i> ):        |

**Information reported:**

- |                                                                                                       |                                                                                   |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Allocated amounts                                                 | <input checked="" type="checkbox"/> Green Bond financed share of total investment |
| <input checked="" type="checkbox"/> Other ( <i>please specify</i> ): <i>new and existing projects</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"/> Other ESG indicators ( <i>please specify</i> ): estimated annual energy consumption of green buildings, sustainable labels and certificates of green buildings, volume of construction material recycled, prevented CO <sub>2</sub> emissions from recycled material (in tCO <sub>2</sub> eq) |

**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 ( <i>please specify</i> ): sustainability report or specific impact report, 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.)

PORR corporate website: <https://porr-group.com/en/>

**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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