

## SECOND PARTY OPINION (SPO)

Sustainability Quality of the Issuer and Green Bond Framework

Federal State of Hesse

8 May 2025

### VERIFICATION PARAMETERS

Type of instrument contemplated	<ul style="list-style-type: none"><li>Green bonds</li></ul>
Relevant standard	<ul style="list-style-type: none"><li>Green Bond Principles, ICMA, June 2021 (with June 2022 Appendix 1)</li></ul>
Scope of verification	<ul style="list-style-type: none"><li>The Federal State of Hesse’s Green Bond Framework (as of April 29, 2025)</li><li>The Federal State of Hesse’s eligibility criteria (as of April 29, 2025)</li></ul>
Lifecycle	<ul style="list-style-type: none"><li>Pre-issuance verification</li></ul>
Validity	<ul style="list-style-type: none"><li>Valid as long as the cited Framework and the underlying portfolio remain unchanged</li></ul>

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## SCOPE OF WORK

The Federal State of Hesse (“the Issuer” or “Hesse”) commissioned ISS-Corporate to assist with its green bonds by assessing three core elements to determine the sustainability quality of the instruments:

1. Hesse’s Green Bond Framework (as of April 29, 2025), benchmarked against the International Capital Market Association’s (ICMA) Green Bond Principles (GBP).
2. The eligibility criteria — whether the project categories contribute positively to the United Nations Sustainable Development Goals (U.N. SDGs) and how they perform against ISS-Corporate’s proprietary issuance-specific key performance indicators (KPIs) (see Annex 1).
3. Consistency of green bonds with Hesse’s sustainability strategy, drawing on the key sustainability objectives and priorities defined by the Issuer.

## THE FEDERAL STATE OF HESSE OVERVIEW

The State of Hesse is located in the center of Germany, covering an area of 21,115 square kilometers with an estimated population of 6.4 million.

Germany is located in Western Europe. It is a federal parliamentary republic, classified as a high-income country by the World Bank. Germany has an estimated population of 83.6 million as of 2024, with 71% of its population living in urban areas as of 2022, and greenhouse gas emissions per capita of 8.1 tCO<sub>2</sub>e as of 2023, which have been decreasing in the previous years.

### *ESG risks associated with sub-sovereign Issuers*

ISS ESG’s Country Rating identifies sustainability risks in the following key areas for Germany:<sup>1</sup> political system and governance, human rights and fundamental freedoms, social conditions, natural resources, climate change and energy, and production and consumption.

This report focuses on the sustainability credentials of the issuance. Part III of this report assesses the consistency between the issuance and the Issuer’s overall sustainability strategy.

<sup>1</sup> Please note that this is not an Issuer-specific assessment.

## ASSESSMENT SUMMARY

SPO SECTION	SUMMARY	EVALUATION <sup>2</sup>
<p><b>Part I:</b></p> <p><b>Alignment with GBP</b></p>	<p>The Issuer has defined a formal concept for its green bonds regarding the use of proceeds, processes for project evaluation and selection, management of proceeds, and reporting. This concept is aligned with the GBP.</p>	<p><b>Aligned</b></p>
<p><b>Part II:</b></p> <p><b>Sustainability quality of the eligibility criteria</b></p>	<p>The green bonds will (re)finance the following eligible asset categories:</p> <p>Green categories: Eco-Friendly Public Transport, Measures Concerning Forests, CO<sub>2</sub>-Neutral State Administration/Energy Efficiency of Public Buildings, Organic Farming and Nature Conservation, Climate Plan, Sustainable (Waste) Water Management and Further Climate and Environmental Protection Measures.</p> <p>Product and/or service-related use of proceeds categories<sup>3</sup> individually contribute to one or more of the following SDGs:</p> <div data-bbox="572 1252 1038 1487" style="text-align: center;">  </div> <p>Other use of proceeds categories improve the operational impacts of Hesse’s borrowers and mitigate potential negative externalities of its sector on one or more of the following SDGs:</p> <div data-bbox="632 1731 983 1848" style="text-align: center;">  </div>	<p><b>Positive</b></p>

<sup>2</sup> The evaluation is based on Hesse’s Green Bond Framework (as of April 29, 2025), on the analyzed eligibility criteria and underlying portfolio as received on Jan. 30, 2025.

<sup>3</sup> Eco-Friendly Public Transport, Measures Concerning Forests, CO<sub>2</sub>-Neutral State Administration/Energy Efficiency of Public Buildings, Organic Farming and Nature Conservation, Climate Plan, Sustainable (Waste) Water Management, Further Climate and Environmental Protection Measures.

SPO SECTION	SUMMARY	EVALUATION <sup>2</sup>
	The environmental and social risks associated with the use of proceeds categories are managed.	
<p><b>Part III:</b></p> <p><b>Consistency of green bonds with Hesse’s sustainability strategy</b></p>	The Issuer clearly describes the key sustainability objectives and the rationale for issuing green bonds. All project categories considered align with the Issuer’s sustainability objectives.	<p><b>Consistent with Issuer’s sustainability strategy</b></p>

## SPO ASSESSMENT

### PART I: ALIGNMENT WITH THE GREEN BOND PRINCIPLES

This section evaluates the alignment of Hesse’s Green Bond Framework (as of April 29, 2025) with the GBP.

GBP	ALIGNMENT	OPINION
<p><b>1. Use of proceeds</b></p>	<p>✓</p>	<p>The use of proceeds description provided by Hesse’s Green Bond Framework is <b>aligned</b> with the GBP.</p> <p>The Issuer’s green categories align with the project categories proposed by the GBP. Criteria are clearly and transparently defined. Disclosure of the distribution of proceeds by project category is provided, as is an allocation period and a commitment to report by project category. Environmental and social benefits are also described.</p> <p>The Issuer confirms that all proceeds will be used for refinancing eligible expenditures and defines the portfolio to be refinanced. Furthermore, the Issuer discloses the planned amount of proceeds to be allocated by project category and defines a look-back period of two years, in line with best market practices.</p>
<p><b>2. Process for project evaluation and selection</b></p>	<p>✓</p>	<p>The process for project evaluation and selection described in Hesse’s Green Bond Framework is <b>aligned</b> with the GBP. The project selection process is clearly defined. ESG risks associated with the project categories are identified and appropriately managed. Moreover, selected projects demonstrate alignment with the Issuer’s sustainability strategy. The Issuer defines exclusion criteria for potentially harmful project categories.</p> <p>The Issuer clearly defines responsibilities within the process for project evaluation and selection, maintains transparency, and involves various</p>

GBP	ALIGNMENT	OPINION
		<p>stakeholders. Furthermore, Hesse identifies the alignment of its Green Bond Framework and green projects with the EU taxonomy, in line with best market practices.</p>
<p><b>3. Management of proceeds</b></p>	<p>✓</p>	<p>The management of proceeds provided by Hesse’s Green Bond Framework is <b>aligned</b> with the GBP. Net proceeds collected will equal the amount allocated to eligible projects. These proceeds are tracked appropriately and managed on a bond-by-bond basis. Furthermore, the Issuer discloses temporary investment instruments utilized for unallocated proceeds.</p> <p>The Issuer has defined an expected allocation period of 12 months, consistent with best market practices.</p>
<p><b>4. Reporting</b></p>	<p>✓</p>	<p>The allocation and impact reporting provided by Hesse’s Green Bond Framework is <b>aligned</b> with the GBP.</p> <p>The Issuer commits to disclosing the allocation of proceeds transparently and reporting with appropriate frequency. This reporting will be publicly available on the Issuer’s website. Hesse has disclosed the type of information to be reported and clarifies that the expected reporting will be at the project category level. Furthermore, the Issuer commits to reporting annually until the proceeds have been fully allocated.</p> <p>The Issuer provides transparency on the level of impact reporting, the information reported, and further defines the duration and frequency of impact reporting. Moreover, Hesse discloses the location and link to the report(s), in line with best market practices.</p>

## PART II: SUSTAINABILITY QUALITY OF THE ELIGIBILITY CRITERIA

### A. CONTRIBUTION OF THE GREEN BONDS TO THE U.N. SDGs<sup>4</sup>

Sub-sovereigns can contribute to the achievement of the SDGs by providing specific services/products that help address global sustainability challenges, and by being responsible actors, working to minimize negative externalities in their operations along the entire value chain. This section assesses the SDG impact of the use of proceeds (UoP) categories financed by the Issuer in two different ways, depending on whether the proceeds are used to (re)finance:

- Specific products/services
- Improvements to operational performance

#### 1. Products and services

The assessment of UoP categories for (re)financing products and services is based on a variety of internal and external sources, such as ISS ESG’s SDG Solutions Assessment, a proprietary methodology designed to assess the impact of an Issuer’s products or services on the U.N. SDGs, as well as other ESG benchmarks (the EU taxonomy Climate Delegated Act, the Green Bond Principles and other regional taxonomies, standards and sustainability criteria).

The assessment of UoP categories for (re)financing specific products and services is displayed on a three-point scale:



Each of the green bonds’ UoP categories has been assessed for its contribution to, or obstruction of, the SDGs:

USE OF PROCEEDS (PRODUCTS/SERVICES) <sup>5</sup>	CONTRIBUTION OR OBSTRUCTION <sup>6</sup>	SUSTAINABLE DEVELOPMENT GOALS
<p><b>Eco-Friendly Public Transport</b></p> <ul style="list-style-type: none"> <li>▪ <i>Financing of public transport associations to ensure comprehensive passenger transport in Hesse</i></li> </ul>	<b>Contribution</b>	

<sup>4</sup> The impact of the UoP categories on U.N. SDGs is assessed with proprietary methodology and may therefore differ from the Issuer’s description in the Framework.

<sup>5</sup> The use of proceeds categories listed in this table match the “description of eligible green expenditures” in Figure 1 of the Green Bond Framework. While the “eligibility criteria” formulated in Figure 1 refer to the same project categories, the information presented therein is less granular.

<sup>6</sup> The review is limited to the portfolio of projects that will be refinanced with the bond proceeds.

USE OF PROCEEDS (PRODUCTS/SERVICES) <sup>5</sup>	CONTRIBUTION OR OBSTRUCTION <sup>6</sup>	SUSTAINABLE DEVELOPMENT GOALS	
<p><b>Eco-Friendly Public Transport</b></p> <ul style="list-style-type: none"> <li>Financing of specific passenger public transport projects (e.g., station modernization, rail network expansion)</li> <li>Funding and promotion of municipal measures to improve infrastructure for pedestrian and bicycle traffic</li> </ul>	<p><b>Contribution</b></p>	 	
<p><b>Eco-Friendly Public Transport</b></p> <ul style="list-style-type: none"> <li>Expenditures to promote more climate-friendly means of transport and its usage (e.g., job tickets, student tickets)</li> </ul>		<p><b>Contribution <sup>7</sup></b></p>	
<p><b>Measures Concerning Forests</b></p> <ul style="list-style-type: none"> <li>Expenditures for environmental protection in the state forest (e.g., for the preservation of species and development of biotopes)</li> <li>Expenditures for nature conservation and landscape management in the national park</li> <li>Expenditures for improving water retention in forests</li> <li>Reforestation, pre-growing and substructure expenditures on site-appropriate flora</li> </ul>	<p><b>Contribution</b></p>		
<p><b>CO<sub>2</sub>-Neutral State Administration/Energy Efficiency of Public Buildings</b></p> <ul style="list-style-type: none"> <li>Investment program to implement the goals of the Hessian Energy Act</li> </ul>		<p><b>Contribution</b></p>	
<p><b>CO<sub>2</sub>-Neutral State Administration/Energy Efficiency of Public Buildings</b></p> <ul style="list-style-type: none"> <li>Charging infrastructure for e-vehicles at national offices, construction of additional bicycle parking areas for bicycles and pedelecs</li> <li>Installation of photovoltaic systems and solar thermal systems on roofs of state buildings.</li> </ul>		<p><b>Contribution</b></p>	 

<sup>7</sup> This category could provide both positive environmental and social benefits. Hesse has classified it as an environmental category, while ISS considers the most direct impact to be linked to social-related topics. However, Hesse points out that a positive environmental impact derives from the activity's incentivization of public transport use over private vehicles, thereby reducing CO<sub>2</sub> emissions.

USE OF PROCEEDS (PRODUCTS/SERVICES) <sup>5</sup>	CONTRIBUTION OR OBSTRUCTION <sup>6</sup>	SUSTAINABLE DEVELOPMENT GOALS	
<p><b>Organic Farming and Nature Conservation</b></p> <ul style="list-style-type: none"> <li>Expenditures to finance advisory and information events for low-emission farming and horticultural businesses<sup>8</sup></li> </ul>	<p><b>Contribution</b></p>		
<p><b>Climate Plan</b></p> <ul style="list-style-type: none"> <li>Projects for the development and ramp-up of electric drives in public transport</li> <li>Projects to implement the local mobility strategy to strengthen pedestrian and bicycle traffic (except for mobility management, rental offers, promotion of the use of cargo bikes/special bikes)</li> </ul>		<p><b>Contribution</b></p>	 
<p><b>Climate Plan</b></p> <ul style="list-style-type: none"> <li>Projects to implement the local mobility strategy to strengthen pedestrian and bicycle traffic (strengthening of intermodal and climate-friendly offers such as municipal and company mobility management, rental offers, and promotion of the use of cargo bikes/special bikes)</li> <li>Expenditures for ecological flood protection and floodplain restoration</li> </ul>			<p><b>Contribution</b></p>
<p><b>Climate Plan</b></p> <ul style="list-style-type: none"> <li>Measures to preserve and further develop biotope network systems</li> </ul>		<p><b>Contribution</b></p>	
<p><b>Sustainable (Waste) Water Management</b></p> <ul style="list-style-type: none"> <li>Measures to preserve and restore natural waters (e.g., conservation and restoration of near-natural waters, including their banks and floodplains, in the area of water structure including the "100 Wild Streams" program)</li> </ul>			<p><b>Contribution</b></p>

<sup>8</sup> For projects within this category, ISS-Corporate considers the most direct impact to be linked to social topics. ISS notes that this expenditure is also linked to environmental improvements through the capacity building content that will be supported. Hesse has elected to classify it as an environmental category.

USE OF PROCEEDS (PRODUCTS/SERVICES) <sup>5</sup>	CONTRIBUTION OR OBSTRUCTION <sup>6</sup>	SUSTAINABLE DEVELOPMENT GOALS
<p><b>Sustainable (Waste) Water Management</b></p> <ul style="list-style-type: none"> <li>Measures to preserve and restore natural waters (e.g., implementation of measures for advanced wastewater treatment and construction of a fourth treatment stage at wastewater treatment plants, especially where the quality of drinking water production may be compromised by trace substances)</li> </ul>	<p><b>Contribution</b></p>	
<p><b>Sustainable (Waste) Water Management</b></p> <ul style="list-style-type: none"> <li>Expenditures for the development of flood risk management plans and the construction of appropriate protection systems</li> </ul>		<p><b>Contribution</b></p>
<p><b>Further Climate and Environmental Protection Measures</b></p> <ul style="list-style-type: none"> <li>Establishment of the State Energy Agency with the tasks of consulting, education and public relations on the topics of energy efficiency, renewable energies and climate protection</li> </ul>	<p><b>Contribution</b></p>	 
<p><b>Further Climate and Environmental Protection Measures</b></p> <ul style="list-style-type: none"> <li>Further development of the existing broadband infrastructure and creation of gigabit-capable infrastructures<sup>9, 10</sup></li> </ul>		<p><b>Contribution</b></p>
<p><b>Further Climate and Environmental Protection Measures</b></p> <ul style="list-style-type: none"> <li>Expenditures for the support program "Energy Efficiency in Rental Housing (Energieeffizienz im Mietwohnungsbau)" — climate-friendly new construction (Climate-Friendly Residential Building and Climate-Friendly Residential</li> </ul>	<p><b>Contribution</b></p>	 

<sup>9</sup> The State of Hesse confirms that investments will be made in accordance with the [EU Guidelines on the application of State aid rules in relation to rapid broadband deployment](#). This initiative aims to enable the use of modern information and communication technologies in previously underserved areas, specifically districts and municipalities funded are those categorized as "white" or "grey" areas. Eligible areas are underserved and are not expected to be commercially developed within the next three years. Consequently, no improvements will be funded in areas already connected. The aim of these investments is the migration of fiber-to-the-curb infrastructures to fiber-to-the-building and fiber-to-the-home.

<sup>10</sup> For projects within this category, ISS-Corporate considers the most direct impact to be linked to social topics. Hesse has decided to classify it as an environmental category.

USE OF PROCEEDS (PRODUCTS/SERVICES) <sup>5</sup>	CONTRIBUTION OR OBSTRUCTION <sup>6</sup>	SUSTAINABLE DEVELOPMENT GOALS
<i>Building — with QNG, Qualitätssiegel Nachhaltige Gebäude)</i>		

**2. Improvements of operational performance (processes)**

The following assessment qualifies the direction of change, or “operational impact improvement”, resulting from operational performance projects (re)financed by the UoP categories, as well as related SDGs impacted. This assessment demonstrates how the UoP categories mitigate exposure to negative externalities relevant to different sectors and business models that the Issuer intends to support.

The table below illustrates the direction of change resulting from the operational performance improvement projects. The outcome displayed does not represent an absolute or net assessment of operational performance.

USE OF PROCEEDS (PROCESSES)	OPERATIONAL IMPACT IMPROVEMENT <sup>11</sup>	SUSTAINABLE DEVELOPMENT GOALS
<p><b>Measures Concerning Forests</b></p> <ul style="list-style-type: none"> <li><i>Expenditures to finance the 12-point plan for the reforestation of Hessian forests and restore forest damage</i></li> </ul>	✓	
<p><b>CO<sub>2</sub>-Neutral State Administration/Energy Efficiency of Public Buildings</b></p> <ul style="list-style-type: none"> <li><i>Expenditures to increase energy efficiency and promote the use of renewable energy, as well as to promote energetic renovation of public buildings (e.g., via nationwide procurement of green electricity and heat pumps using green electricity)</i></li> </ul>	✓	
<p><b>CO<sub>2</sub>-Neutral State Administration/Energy Efficiency of Public Buildings</b></p> <ul style="list-style-type: none"> <li><i>Expenditures to increase energy efficiency and promote the use of renewable energy, as well as to promote energetic renovation of public buildings (e.g. renovation of buildings)</i></li> </ul>	✓	

<sup>11</sup> Only the direction of change is displayed. The scale of improvement is not assessed.

USE OF PROCEEDS (PROCESSES)	OPERATIONAL IMPACT IMPROVEMENT <sup>11</sup>	SUSTAINABLE DEVELOPMENT GOALS
<p><b>CO<sub>2</sub>-Neutral State Administration/Energy Efficiency of Public Buildings</b></p> <ul style="list-style-type: none"> <li>Expenditures to increase energy efficiency and promote the use of renewable energy, as well as to promote energetic renovation of public buildings (e.g., connection of existing and new buildings to district heating)<sup>12</sup></li> </ul>	<p>✓</p>	
<p><b>Organic Farming and Nature Conservation</b></p> <ul style="list-style-type: none"> <li>Expenditures to promote low-carbon farming and climate-friendly and organic practices</li> </ul>	<p>✓</p>	
<p><b>Climate Plan</b></p> <ul style="list-style-type: none"> <li>Expenditures for the creation of concepts and strategies in the field of sustainability and biodiversity</li> </ul>	<p>✓</p>	
<p><b>Further Climate and Environmental Protection Measures</b></p> <ul style="list-style-type: none"> <li>Expenditures related to climate protection (e.g. implementation of climate protection projects, promotion of climate analyses and studies)<sup>13</sup></li> </ul>	<p>✓</p>	
<p><b>Further Climate and Environmental Protection Measures</b></p> <p>Expenditures for the support program “Energy Efficiency in Rental Housing (Energieeffizienz im Mietwohnungsbau)” — Modernization of residential buildings to an energy-efficient standard</p>	<p>✓</p>	

<sup>12</sup> The State of Hesse is committed to funding connections of existing and new buildings to district heating suppliers only when such connections demonstrably lead to emission savings. Prior to connecting properties to district heating, the State of Hesse routinely conducts profitability calculations in accordance with VDI 2067. These calculations account for cost burdens resulting from the Fuel Emissions Trading Act, as well as environmental impact costs, currently assessed at EUR 300 per tonne of greenhouse gas, according to the methodology of the Federal Environment Agency. District heating systems with “poor” CO<sub>2</sub> emission factors will not be economically viable or eligible for funding. Furthermore, the State of Hesse confirms that its primary district heating suppliers meet the definition of efficient district heating and cooling systems as outlined in Article 2, Point 41 of [Directive 2012/27/EU](#). The Issuer has also confirmed that district heating supply companies are subject to the requirements of the [Heat Planning Act](#). This act stipulates that, from Jan. 1, 2030, at least 30%, and from Jan. 1, 2040, 80% of the supply must originate from renewable energies, unavoidable waste heat or a combination thereof. New heat networks are already subject to a 65% share requirement, effective March 1, 2025.

<sup>13</sup> The State of Hesse has clear [funding guidelines](#) in place to define which projects will be selected for this category.

**B. MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS ASSOCIATED WITH THE ELIGIBILITY CRITERIA**

The table below evaluates the eligibility criteria against issuance-specific KPIs. All of the assets are/will be located in Germany.

**ASSESSMENT AGAINST KPIs**

**Environmental and social risks relevant for all green project categories**

**Biodiversity**



For all expenditures, comprehensive and specific environmental standards apply according to European and national legislation and standards. These standards address areas such as direct emissions to air, noise mitigation and minimization of environmental impact during construction. All projects must observe Article 20a of the Basic Law for the Federal Republic of Germany, the Federal Nature Conservation Act, the Hessian Procurement and Tariff Compliance Act, the common circular decree (EMA Hessen), and the directive on energy-efficient construction and renovation of the State of Hesse. The Joint Circular on Public Procurement of the State of Hesse further specifies that the requirements for the protection, preservation, and promotion of biodiversity must be appropriately considered when planning and preparing specifications for construction work.

An environmental impact assessment is carried out for projects requiring it, in line with national standards based on regulations such as the EU Environmental Impact Assessment Directive and the Natura 2000 Impact Assessment. Section 14 of the Hessian Nature Conservation Act also mandates an environmental impact assessment for certain project types, such as excavations for the extraction of soil components or agricultural use on fallow land or in the area of legally protected biotopes.

**Community dialogue**



The State of Hesse is legally obligated under Article 20 of the Basic Law for the Federal Republic of Germany to adhere to national legislation and international standards and conventions, which mandate a minimum standard of environmental protection and social norms. These principles are considered when making budget expenditures. In doing so, the State of Hesse assesses and manages potential environmental risks associated with eligible green expenditures. The interministerial working group (IMWG) will also consider, if necessary, ESG controversies that could call into question the quality of corresponding past Green Bond expenditures.

Sustainability in public procurement is also addressed by the Joint Circular on Public Procurement (Vergabeerlass). The Hessian State Budget Code requires that economic feasibility studies, incorporating ecological and social costs, sustainability aspects (e.g., climate protection, climate change adaptation), and project-associated risks, be prepared for projects within the administration.

The regulations of the German Building Code (Baugesetzbuch/BauGB) provide for the consideration of local residents' interests during the development of land-use plans and zoning maps (e.g., through public display of development plans, opportunities to voice concerns, and case-dependent compensation measures).

### **Circular economy/waste management**

For waste management, the EU Waste Framework Directive (Directive 2008/98/EC) defines essential waste-related terms and establishes, among other things, a five-level waste hierarchy. The Waste Framework Directive includes requirements to promote waste prevention and minimum recycling rates. Member States must take measures to encourage the reuse of products and establish systems that encourage repair and reuse.



The law to promote the recycling economy and ensure the environmentally compatible management of waste (recycling economy law) forms the core regulation of waste legislation. Regulations for specific product waste can also be found in the Packaging Act, the End-of-Life Vehicle Ordinance, the Battery Act, and the Electrical and Electronic Equipment Act. The Electrical and Electronic Equipment Act, for example, aims to avoid waste, reduce waste volume through reuse, and includes specifications for collection, recovery and recycling quotas, as well as reducing pollutants by prohibiting the use of certain hazardous substances in the manufacture of electrical and electronic equipment.

The Federal Circular Economy Act is supplemented and specified by the waste laws of the federal states. The state waste laws primarily concern enforcement. According to Directive 2008/98/EC, municipal waste, for example, must achieve a recycling rate of at least 65% by weight by the end of 2035.

For construction projects, implementing construction companies and subcontractors are required to isolate and remove waste and pollutants, in accordance with national legislation.

According to Directive 2008/98/EC, construction and demolition waste must have achieved a recycling rate of at least 70% by the end of 2020. This requirement is implemented by Section 14 (2) of the Circular Economy Act.

In addition to the European Water Framework Directive and other European and national legislation and regulations, the Water Resources Act (WHG) forms the basis for sustainable water management. According to the WHG, discharged water must meet a quality standard (based on the state of the art) before discharge.

Directive 2016/2284 (NEC Directive) sets national emission reduction commitments for the air pollutants sulfur dioxide, nitrogen oxides (NOx), ammonia (NH3) and volatile organic compounds other than methane, and particulate matter. The EU legal requirements for pollutants and original federal law requirements can be found primarily in the Federal Immission Control Act and its associated ordinances. Furthermore, the Hessian State Agency for Nature Conservation, Environment and Geology operates a state-wide measuring network for area-based monitoring and assessment of air quality.

Protection against hazardous substances is defined in the Chemicals Act.

**Labor, health and safety**



For all projects within the country and financed by the state, compliance with national legislation and standards is mandatory. Furthermore, adherence to the Hessian Procurement and Tariff Compliance Act is required, ensuring stringent labor, health and safety standards. All expenditures are disbursed in Germany, a country with established high standards concerning labor rights, including adherence to ILO Core Conventions.

**Users' safety for products**



For all expenditures, the health and safety of employees, contractors and operators are ensured in accordance with European and national legislation and standards. Within the State of Hessen, the awarding of contracts for the provision of services is conducted through a [regulated process](#). This process is outlined in the Sector Ordinances, which are based on national law issued by the Federal Ministry of Economic Affairs and Climate Action (BMWK - Sektorenverordnung).

The awarding of construction, supply and service contracts in the areas of transport, drinking water supply and energy supply is governed by the Utilities Sector Ordinance (SektVO), while the Concession Procurement Ordinance (KonzVgV) details the awarding of construction and service concessions.

German product safety law (ProdSG) also stipulates that products may only be placed on the market if they do not endanger the safety and health of individuals when used as intended or in a foreseeable manner.

The Food, Consumer Goods and Feed Code (LFGB) ensures the protection of end consumers by preventing or averting risks to human health caused by food items, cosmetic products and consumer goods.

The Federal Building Code regulates urban land-use planning and is supplemented by the Hessian Building Code, which contains regulations on fire protection, heat, noise and vibration protection, among other areas.

The Ordinance on the Registration of Road Vehicles (StVZO) specifies that vehicles must be constructed and equipped in a way that their operation does not harm or endanger, hinder, or disturb others more than is unavoidable, and that vehicle occupants are protected as far as possible from injuries, especially in the event of accidents, so that the extent and consequences of injuries remain as minimal as possible.

Safety rules for the railway system are defined under national legislation (Nationale Sicherheitsvorschriften für das Eisenbahnsystem in Deutschland).

### Inclusion



According to Article 3 of the Basic Law for the Federal Republic of Germany, the state prohibits discrimination based on gender, descent, race, language, homeland and origin, faith, religious or political views. Furthermore, discrimination based on disability is also prohibited. Similar provisions are found in the Constitution of the State of Hesse, which has established specific employment targets for individuals with severe disabilities.

### Quality management



There is no overarching legal regulation governing the cross-sectoral application of quality standards or quality management systems.

However, the Hessian State Budget Code stipulates that comprehensive economic feasibility studies must be conducted for all financially impactful measures, explicitly considering ecological and social follow-up costs. Four departments within the Hessian administration, including the Ministry of Finance, have established and validated an [environmental management process](#). To ensure operational quality within the state, Hesse implemented the Hessian Climate Act, which provides legal frameworks for climate-neutral state administration operations by 2030, mandates the development of a renovation roadmap for state-owned buildings by 2026, and requires the utilization of a

carbon price as a basis for planning, selecting and implementing investments and procurement activities. Furthermore, an environmental impact assessment is conducted for specific projects related to biodiversity, water, climate, soil and landscape.

Sector-specific quality standards are maintained through acts and laws implemented within Hesse, designed to monitor and address the unique risks and needs of each sector.

The budgetary and economic management of the state is audited annually by the Hessian Court of Audit, the state's highest auditing authority. This audit reviews the handling of Hesse's tax revenues, and findings are reported to the parliament and made publicly available.

## Ethics

The Public Corporate Governance Code of the State of Hesse outlines essential rules and recommendations for the control, management and monitoring of companies in which the State of Hesse holds an interest. These rules are based on statutory regulations and recognized standards of sound and responsible corporate governance. The collective agreement stipulates that employees may not accept rewards, gifts, commissions or other benefits from third parties in connection with their work. Exceptions are permissible only with the employer's prior consent. Should employees be offered such benefits, they must immediately notify the employer without delay. The Hessian Ministry of Finance (HMdF), for example, maintains an internal audit department that can be contacted immediately if there are any suspicions of corrupt behavior. Furthermore, a central coordination office for the prevention of fraudulent actions or errors ("Zenko") in accounting-relevant application systems was also established at the HMdF in 2012 for all departments. This office collects reports on known fraudulent actions, abnormalities and errors from accounting-relevant application systems across all departments. Through this systematic recording, risks can be assessed and further mitigation measures implemented.



Furthermore, the principles for sponsoring, advertising, donations and patronage donations to finance public tasks (StAnz, 01/18/2016), the guidelines for preventing and combating corruption in public administration (StAnz. 52/2019 p. 1357), and the Hessian Public Procurement and Tariff Loyalty Act (HVTG) further regulate the prevention and combating of corruption.

**Water**

The Water Framework Directive aims to protect inland surface waters, transitional waters, coastal waters and groundwater within EU member states.



At the federal level, key regulations are established in the Water Resources Act (WHG), which governs wastewater management (the technical standard of wastewater treatment is defined within Section 54 of the WHG) and seeks to minimize wastewater pollution in Germany. Regulations pertaining to water withdrawal, water scarcity, water supply and water quality are outlined in the General Conditions for Water Supply Ordinance (AVBWasserV), while the Drinking Water Ordinance (TrinkwV) specifies the quality requirements for drinking water in Germany.

**Environmental and social risks relevant for specific green project categories****Sustainable forestry**

Hesse adheres to national and European forest regulations. The Law on the Conservation of Forests and the Promotion of Forest Management (Federal Forest Law) aims to maintain and, where necessary, increase forests, as well as promote forestry, recognizing the utility function of forests and their significance for the environment. Sustainability and biodiversity are also integral to the Hessian Forest Act (Section 1 Hessian Forest Act). Furthermore, Section 5 of the Federal Nature Conservation Act stipulates that forestry practices should establish near-natural forests, manage them sustainably and maintain a sufficient proportion of native forest plants. The Hessian State Forest is certified according to the requirements of the PEFC.

**Environmental impact of agriculture — organic farming and nature conservation**

Hesse adheres to the Federal Nature Conservation Act and the Federal Soil Protection Act, which include specific provisions for agricultural land use. Furthermore, national law often requires an environmental impact assessment for agricultural projects.

**Exclusion of sectors and activities with a detrimental impact on the environment or society**

According to the Issuer, eligible expenditures will exclude the following: armaments, oil and coal (as fossil fuels), shale gas/fracking, nuclear energy (e.g., production, transport, storage and power generation), and tobacco.

## PART III: CONSISTENCY OF GREEN BONDS WITH THE FEDERAL STATE OF HESSE’S SUSTAINABILITY STRATEGY

*Key sustainability objectives and priorities defined by the Issuer*

TOPIC	ISSUER APPROACH
<p><b>Strategic ESG topics</b></p>	<p>The Issuer’s sustainability strategy centers on integrating sustainability into its decisions and actions, emphasizing the achievement of long-term climate neutrality and robust climate protection. This strategy incorporates well-defined targets, including reducing greenhouse gas emissions by 65% by 2030, 88% by 2040, and achieving net neutrality by 2045, with the ultimate goal of reaching negative emissions after 2050. The strategy is operationalized through detailed plans, including an integrated <a href="#">Climate Protection Plan</a> outlining over 140 measures and a subsequent <a href="#">Climate Plan</a> with 57 additional complementary measures, which collectively provide a comprehensive roadmap for both mitigation and adaptation.</p> <p>Sustainability pillars are defined by aligning targets with internationally recognized frameworks, such as mapping state expenditures to the 17 U.N. SDGs and utilizing predefined indicators to monitor progress.</p>
<p><b>ESG goals/targets</b></p>	<p>The Issuer has established ESG targets across various timeframes. In the short term, the state is targeting significant reductions in greenhouse gas emissions by 2030, with a more substantial reduction targeted by 2040 as a mid-term goal. The long-term objective is to achieve net greenhouse gas neutrality by 2045, with plans to pursue negative emissions beyond 2050. These targets are embedded within the state's climate and sustainability strategies and are monitored and updated through regular progress reports and integrated sustainability disclosures. These efforts are documented annually in Hesse’s <a href="#">CO<sub>2</sub> balance sheet</a>.</p>
<p><b>Action plan</b></p>	<p>Land Hesse’s Climate Plan is a strategic roadmap designed to guide the state toward a climate-neutral future. The plan establishes greenhouse gas reduction targets along a clearly defined pathway that aligns with both national and international climate objectives. Medium- and long-term milestones ensure that progress is measurable and transparent. It outlines a variety of sector-specific measures across energy, mobility, urban development, and economic transformation. In the energy sector, the plan emphasizes the transition to renewable energy sources, enhanced energy efficiency in buildings and industry, and the modernization of energy</p>

TOPIC	ISSUER APPROACH
	<p>infrastructure. For transportation, it promotes sustainable mobility solutions by expanding public transport networks, supporting electric vehicle adoption, and improving infrastructure for cycling and walking. Urban and regional development is addressed by advocating for sustainable building practices, the retrofitting of existing structures, and the creation of green spaces to enhance urban climate resilience. The State of Hesse discloses relevant budget expenditures matched to SDGs in its <a href="#">Annual Report</a>.</p>
<p><b>Climate transition strategy</b></p>	<p>The State of Hesse’s climate transition strategy is built on a sustainability framework that aligns its mid- to long-term targets with global climate scenarios and science-based pathways. The strategy sets ambitious emission reduction goals, envisioning a 65% reduction by 2030 and, at least an 88% reduction by 2040, ultimately achieving net greenhouse gas neutrality by 2045. This aims to keep the state's contribution to global warming well below two degrees Celsius, ideally near 1.5 degrees Celsius, above pre-industrial levels. This planned transition is central to Hesse’s broader commitment to ecological, economic and social sustainability. It is integrated into the state’s overall governance, where an interministerial working group, chaired by the Hessian Ministry of Finance and composed of representatives from multiple ministries, oversees the validation of frameworks, assessment of eligible green expenditures, and monitoring of progress through regular impact and sustainability reports. Complementary local initiatives and networks further embed these climate measures within regional practices, ensuring that the transition trajectory remains both material to the state’s overall operations and comprehensively disclosed through periodic progress reports and integrated annual reporting aligned with the U.N. SDGs.</p>
<p><b>2030 Agenda for Sustainable Development</b></p>	<p>The Issuer’s framework is designed to implement the 2030 Agenda for Sustainable Development. In 2018, the state of Hessen developed 22 guiding principles based on the 17 SDGs. The state of Hessen tracks the progress of its sustainability strategy toward the U.N. SDGs in its <a href="#">Progress Report</a> and the <a href="#">supplementary report</a> to the Progress Report.</p>
<p><b>ESG risk and sustainability strategy management</b></p>	<p>The State of Hesse addresses ESG topics through comprehensive engagement with stakeholders, including representatives from business, academia, public administration, politics and civil society. This approach is enhanced by the expertise of specialized institutions, such as Hessian universities and the Centre for Climate Change and Adaptation, which support the state's sustainability initiatives. Governance is centrally managed through an IMWG, chaired by the</p>

TOPIC	ISSUER APPROACH
	<p>Hessian Ministry of Finance. The IMWG comprises representatives various ministries, including economics, energy, transport, housing, environment, climate protection, agriculture, consumer protection, interior, sports, science, art, construction and finance, to validate frameworks, assess eligibility criteria and oversee the allocation and reporting of green expenditures. Local initiatives, such as municipal alliances like "Hessen aktiv: Die Klima-Kommunen" and networks like the Hessian Alliance for Sustainability, further align regional efforts with global sustainability goals. Transparency and accountability are maintained through regular sustainability progress reports and the integration of sustainability reporting into the annual state report, mapping expenditures to the U.N. SDGs. ESG risks are tracked via Hesse's CO<sub>2</sub> balance sheet and the energy transition monitoring report. Furthermore, specialized climate action plans have been implemented to address physical risks, such as <a href="#">heat waves</a> and <a href="#">flooding</a>.</p>
<p><b>Issuer ranking against international indexes</b></p>	<ul style="list-style-type: none"> <li>▪ Human Development Index: 5, in 2023</li> <li>▪ Corruption Perception Index: 15, in 2024</li> <li>▪ Global Peace Index: 20, in 2024</li> </ul>
<p><b>Sustainability reporting</b></p>	<p>The Issuer reports on its sustainable instruments in accordance with the Green Bond Principles. The sustainability report and <a href="#">progress calculation</a> against the target SDGs are prepared according to the methodology of the German Federal Statistical Office (Statistisches Bundesamt), within the framework of the German Sustainability Strategy.</p>
<p><b>Industry associations, collective commitments</b></p>	<p>Hesse is engaged in the Green and Sustainable Finance Cluster Germany e.V., having launched the central financial market initiative in the field of green and sustainable finance in 2017. In 2019, Hesse became a signatory to the U.N. Principles for Responsible Investment. Furthermore, the Hessian state government is a member of the "Under2 Memorandum of Understanding".</p>
<p><b>Previous sustainable or sustainability-linked issuances or transactions and publication of sustainable financing framework</b></p>	<p>The Issuer has previously issued two green bonds: Green Bond No. 1 (ISIN DE000A1RQD43), with a value of EUR 600 million and a maturity date of June 18, 2031, and Green Bond No. 2 (ISIN DE000A1RQEK7), with a value of EUR 1,000 million and a maturity date of July 4, 2033.</p>

*Rationale for issuance*

Hesse views green and sustainable finance as a key driver in the transition toward a more sustainable economy. To facilitate this, Hesse has established a Green Bond Framework, enabling the issuance of its third green bond in compliance with international climate standards. This will further contribute to ecologically sustainable refinancing and support the policy goal of reducing global warming. To achieve these objectives, Hesse has identified seven focus areas to address environmental issues: eco-friendly public transport, measures concerning forests, CO<sub>2</sub>-neutral state administration/energy efficiency of public buildings, organic farming and nature conservation, Climate Plan implementation, sustainable (waste) water management, and further climate and environmental protection measures. Strategic priorities have been assigned to each area. By issuing its Green Bond Framework, Hesse also aims to provide necessary transparency to investors regarding this type of financial product, meeting their increasing demand to invest financial resources in an ecologically sustainable manner.

**Opinion:** *The Issuer clearly describes the key sustainability objectives and the rationale for issuing green bonds. All project categories considered align with the Issuer's sustainability objectives.*

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## ANNEX 1: METHODOLOGY

The ISS-Corporate SPO provides an assessment of labeled transactions against international standards using ISS-Corporate's proprietary [methodology](#).

## ANNEX 2: QUALITY MANAGEMENT PROCESSES

### SCOPE

Hesse commissioned ISS-Corporate to compile a green bonds SPO. The second-party opinion process includes verifying whether the Green Bond Framework aligns with the GBP and assessing the sustainability credentials of its green bonds, as well as the Issuer's sustainability strategy.

### CRITERIA

Relevant standards for this second-party opinion:

- Green Bond Principles, ICMA, June 2021 (with June 2022 Appendix 1)

### ISSUER'S RESPONSIBILITY

Hesse's responsibility was to provide information and documentation on:

- Framework
- Eligibility criteria
- Documentation of ESG risk management at the project category level

### ISS-CORPORATE'S VERIFICATION PROCESS

Since 2014, ISS Group, which ISS-Corporate is part of, has built up a reputation as a highly reputed thought leader in the green and social bond market and has become one of the first CBI-approved verifiers.

This independent second-party opinion of the green bonds to be issued by Hesse has been conducted based on proprietary methodology and in line with the GBP.

The engagement with Hesse took place from March to May 2025.

### ISS-CORPORATE'S BUSINESS PRACTICES

ISS-Corporate has conducted this verification in strict compliance with the ISS Group Code of Ethics, which lays out detailed requirements in integrity, transparency, professional competence and due care, professional behavior and objectivity for the ISS business and team members. It is designed to ensure that the verification is conducted independently and without any conflicts of interest with other parts of the ISS Group.

## About this SPO

Companies turn to ISS-Corporate for expertise in designing and managing governance, compensation, sustainability and cyber risk programs that align with company goals, reduce risk and manage the needs of a diverse shareholder base by delivering best-in-class data, tools and advisory services.

ISS-Corporate assesses alignment with external principles (e.g., the Green/Social Bond Principles), analyzes the sustainability quality of the assets and reviews the sustainability performance of the Issuer itself. Following these three steps, we draw up an independent SPO so investors are as well-informed as possible about the quality of the bond/loan from a sustainability perspective.

Please visit ISS-Corporate's [website](#) to learn more about our services for bond issuers.

For more information on SPO services, please contact [SPOsales@iss-corporate.com](mailto:SPOsales@iss-corporate.com).

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