HESSEN **State of Hesse Green Bond 2025 - Investor Presentation** Frankfurt Wiesbaden **As of May 2025**

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Summary





- GDP: EUR 368 billion in 2024 (approx. 8.5% of German GDP)
- S&P Rating: A-1+ (short-term), AA+ (long-term), with a stable outlook¹⁾
- Scope Rating: S-1+ (short-term), AAA (long-term), with stable outlook²⁾

Sustainability strategy



- Launch of the sustainability strategy in 2008
- Decision in 2015 that Hesse will become climate-neutral; Decision in 2021 to bring forward the goal of climate neutrality (in line with the target of the Federal Government) from 2050 to 2045
- Adoption of a climate action plan in March 2017 with 140 measures, of which 127 measures have already been completed or are in ongoing implementation
- · Anchoring of the principle of sustainability as a state goal in the constitution in 2018
- · To achieve the climate policy goals, the updated climate plan was adopted in 2023 with 57 new measures
- Hessian Climate Act: Net Greenhouse Gas Neutrality by 2045 and Negative Greenhouse Gas Emissions from 2050
- In the annual report of the state of Hesse, sustainable actions have been reported since 2022 and expenses have been assigned to the 17 Sustainable Development Goals of the United Nations (UN SDGs)

Updated Green Bond Framework



- Alignment with the ICMA Green Bond Principles (GBP) and the United Nations Sustainable Development Goals (UN SDGs); Assignment of project categories to EU environmental objectives and corresponding activities as a first step towards the EU Taxonomy
- External Second Party Opinion from ISS-Corporate that the framework is in line with the ICMA GBP and makes a significant contribution to achieving the UN SDGs
- Obligation to annually publish Green Bond Reporting (Allocation and Impact Report)

Third Green Bond Issue



- · Marketing and issuance of the third green bond planned for June 2025
- Total EUR 1,814 million of eligible green expenditure for the financial years 2023 and 2024
- Benchmark format up to max. EUR 1,500 million
- 1) last confirmed by letter dated 11.04.2025
- 2) last confirmed by letter dated 18.04.2025

HESSE: KEY DATA AND BUDGET

Focus on Hesse

Key data



21,115 km² Area:



6.3 million¹⁾ Population: Persons in employment: 3.6 million¹⁾



Inflation rate 2023: 5.8% Inflation rate 2022: 6.8% Inflation rate 2021: 2.8%



State capital: Wiesbaden Largest city:

Frankfurt am Main



Coalition of CDU and SPD **Current government:**

Prime Minister: Boris Rhein

Next election: 2028



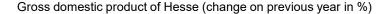
Gross domestic product: EUR 368 billion¹⁾ Gross domestic product per capita: EUR 57,290¹⁾

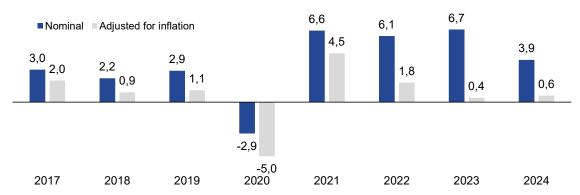
Unemployment rate: $5.8\%^{2)}$



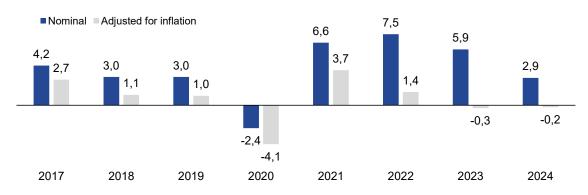
Development of the economy in Hesse in a German comparison

Balanced and stable economic power in the centre of Germany

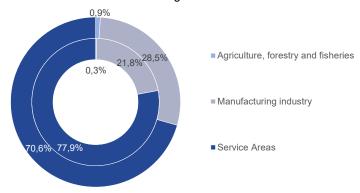




Gross domestic product Germany (change on previous year in %)



Economic breakdown of gross value added in 2024



Inner Circle = Hesse; Outer Circle = Germany

Highlights in Hesse



Frankfurt as leading financial and supervisory centre in continental Europe with around 250 financial and insurance institutions



Employment structure: 77.9% services, 21.8% manufacturing and 0.3% other industries



European Information & Communication Technology Centre; DE-CIX as the world's largest Internet exchange in Frankfurt



Frankfurt has one of the most experienced start-up pools in the world and offers the best access to the international economy



Satellite Control Centre of the European Space Agency (ESA) in

Source: https://statistik.hessen.de/ and https://startupgenome.com/ecosystems/frankfurt

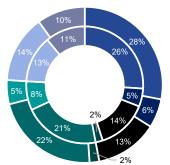
State budget 2025

Revenue and expenditure (plan): EUR 50 billion

		Income
	2024	2025
	Actual Income	Plan Income
Taxes and parafiscal income	51%	55%
Own income	4%	3%
Third-party grants	12%	14%
Borrowing	20%	14%
Other income	13%	13%
	100%	100%

	ıres

	2024	2025	
	Actual Expenses	Plan Expenses	
Human resources	26%	28%	
Administrative expenditure	5%	6%	
Repayment expenditure	14%	13%	
Interest expenses	2%	2%	
Transmission expenditure (excl. MFE)	21%	22%	
Capital expenditure (excl. MFE)	8%	5%	
Municipal financial equalization	13%	14%	
Other expenditure	11%	10%	
	100%	100%	

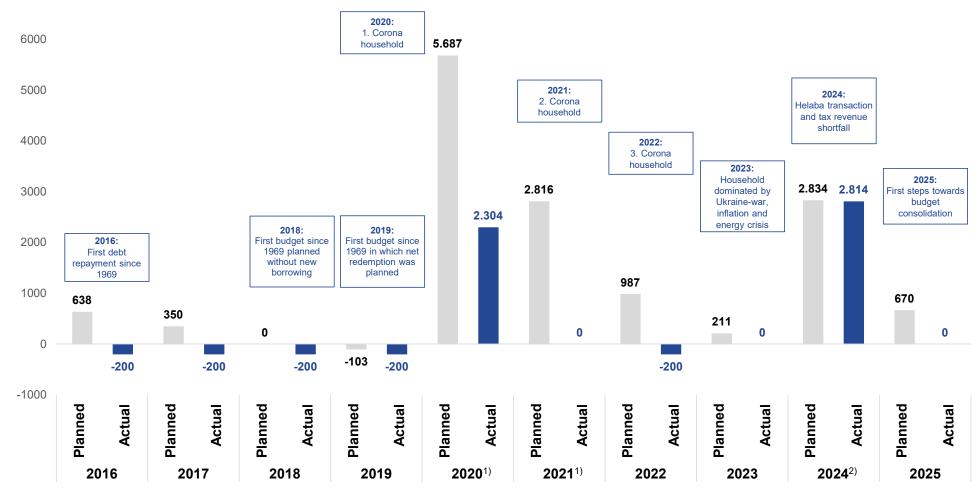


inner circle = 2024 is ; Outer Circle = 2025 Plan

- Human resources
- Administrative expenditure
- Repayment expenditure
- Interest expenses
- Transmission expenditure (excl. MFE)
- Capital expenditure (excl. MFE)
- Municipal financial equalization
- Other expenditure

Development of net borrowing

New debt falls to 670 million euros - debt brake is complied with

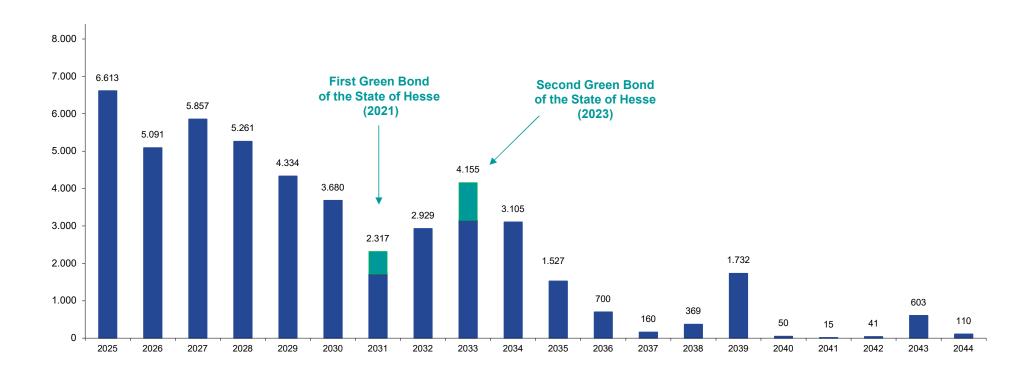


¹⁾ incl. EUR 3,560 million net borrowing in the special fund "Securing Hessen's Good Future" in 2020 and 2021. These debts were transferred to the state budget on 01.01.2022

²⁾ EUR 2,000 million capital measure at Helaba

Balanced maturity profile of the State of Hesse

Maturities in EUR million (as of 03.04.2025)



Budget and refinancing in 2025

Advantages for investors



 Attractive yield premium for investors compared to German government bonds, depending on maturity and prevailing market conditions



- Continuous and regular funding activity
- Stable funding volume
- Active investor dialogue



High creditworthiness, which is also regularly confirmed by the following ratings:

- AA+ (stable) S&P
- AAA (stable) Scope

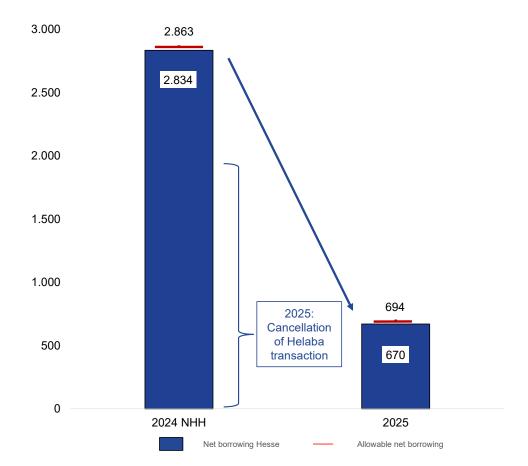


- 0% risk weighting (RWA)
- HQLA 1
- Compliance with the ECB's eligibility criteria for eligible collateral



- Strong liquidity of the individual lines
- Good structure of the maturity structure
- Serving a wide range of investor interests

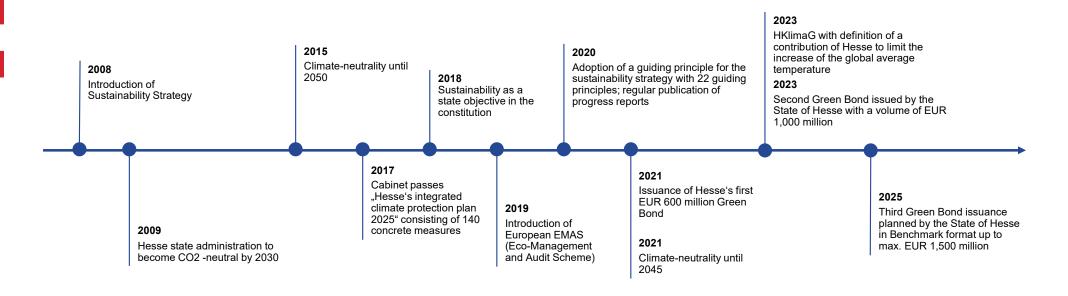




STATE OF HESSE'S SUSTAINABILITY STRATEGY

Sustainability as a state goal in the Hessian constitution since 2018

Hesse bears the responsibility for future generations and strives for a balance between economic growth and sustainable development. The Hessian Sustainability Strategy brings together people from politics, business, science, administration and society to find innovative solutions.



In addition to this overarching strategy, the state is working together with 405 municipalities in the alliance "Hessen aktiv: Die Klima-Kommunen". Climate protection can only succeed through action at all political levels, especially since the municipalities are the state's most important partner for implementation on the ground.

Pension reserve

Hesse is also pursuing a sustainable investment strategy in the investment of the state's pension reserve (approx. EUR 6.3 billion in total assets).

Since 2012

As first German Federal State, Hesse exclusively invests in a sustainable stock index

2019

Hesse is the first Federal State to join the UN Principles for Responsible Investments (UN PRI) with regards to the pension reserve, which includes an annual reporting

2023

Conversion of equity indices to Paris Aligned Benchmark Standard (annual reduction of greenhouse gas emissions of invested companies in order to achieve CO₂ neutrality by 2045)

2019

Tightening of investment guidelines for the stock index ("fossil free") in particular referring to the CO2 responsibility and its subsequent proportionate reduction of the State's CO2 footprint by 75 %

2022

First publication of the results of the UN PRI Assessment Report

Hessian Climate Act (HKlimaG) & Hessian Energy Act (HEG)

The Hessian Climate Act forms the legal framework setting the climate targets for Hesse. The concrete design of climate protection and climate adaptation strategy is carried out via the new climate plan, which contains 57 new, targeted measures. The HEG regulates the promotion of renewable energies, energy efficiency and climate neutrality in Hesse.

Hessian Climate Act (HKlimaG)

Climate protection targets



Greenhouse gas emissions, including measures at European and national level, are being continuously reduced compared to 1990 as follows:

- 1. by at least 40 percent by 2025,
- 2. by 65 percent by 2030,
- 3. by at least 88 percent by 2040.

Climate neutrality



By 2045, greenhouse gas emissions will be reduced to such an extent that net greenhouse gas neutrality is achieved. After 2050, negative greenhouse gas emissions are to be achieved.

Climate Plan Hesse



The Hesse Climate Plan sets out the measures to achieve the state's climate protection targets. The highest state authorities develop measures for their area of responsibility to achieve the objectives for inclusion in the Hesse Climate Plan; agreement must be reached with the minister responsible for climate protection measures.

Hessian Energy Act (HEG)



Renewable energies are given a special status and, according to Section 1 (5) HEG, are "in the overriding public interest and serve public safety".

Target: 100% of electricity and heat consumption is to come from renewable energy by 2045.

Promotion and expansion of renewable energy



Designation of the areas for use of wind energy and photovoltaics as well as obligation for photovoltaic systems on new suitable parking lots and on state-owned buildings.

Increasing energy efficiency in the building sector



At least 2.5 to 3 percent annual energy-efficient renovation rate in existing buildings.

Tightening of the energy requirements for state-owned buildings (new construction: Efficiency House 40, renovation: Efficiency House 55).



Preparation of heat plans by around 60 municipalities and cities in Hesse with 20,000 inhabitants or more. This is intended to make the heat supply and the associated infrastructures more efficient and climateneutral in the long term, as well as to secure the energy supply.



Climate-neutral Hesse by 2045

Target indicators

The 13 target indicators of the Hessen Sustainability Strategy are based on the United Nations' Sustainable Development Goals (SDGs) and are compatible with the indicators at the federal level. Unless otherwise stated, the targets refer to the year 2030.



Organic farming

Increase in the share of organic farming in the total agricultural area to 25%



Renewable energies

Increase in the share of renewable energies in gross final energy consumption to 30%



Greenhouse gas emissions

Reduction of greenhouse gas emissions by at least 50% compared to 1990 levels1)



Nitrogen balance

Reduction of the nitrogen surplus of the utilised agricultural area (according to the area balance) to 40 kg/ha (based on the 5-year moving average)



Structural prohibition of new borrowing

Falling below the standard limit for net borrowing resulting from Article 141 of the Constitution of the State of Hesse



Biodiversity (and landscape quality)

Increase in bird species populations overall and by landscape type to index of 100 by 2020; Target index values to be updated to 2030



Adult obesity

Slowing the average growth in the proportion of the population aged 18 years or older with obesity in the population of the same age between 1999 and 2017



Private and public expenditure on research and

Increase in the share of private and public expenditure on research and development in gross domestic product to at least 3.5%



Reduction

of land use or increase in settlement and transport area to less than 2.5 hectares per day (based on the 4-year average)



Early school leavers

Limit the proportion of 18 to under 25-year-olds in the population of the same age who do not attend (university) school, do not participate in any education or training measure and do not have an upper secondary school leaving certificate to 10%



Broadband coverage

Nationwide expansion of fibre-optic access networks, i.e. the share of households with a fibre-optic connection (FTTB/H) in total households will increase to 95%



Final energy consumption of private households

Qualitative goal: "Continuously reduce the final energy consumption of private households"



Nitrate in groundwater

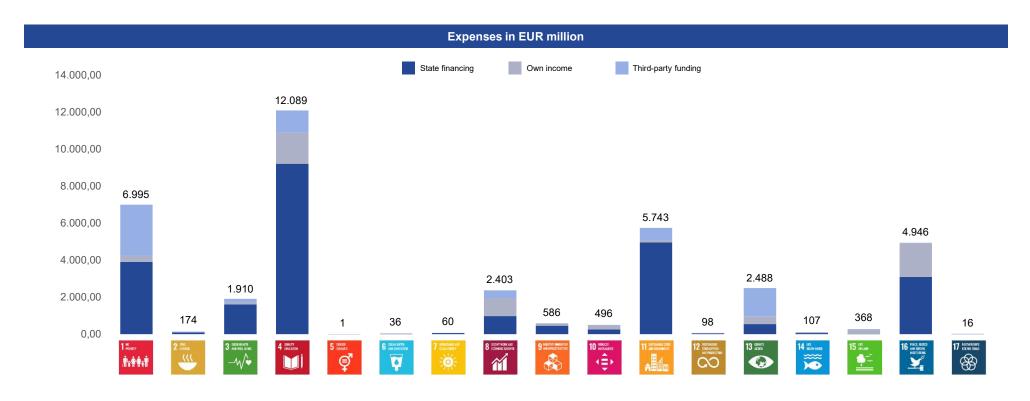
Reduction of the proportion of measuring points with nitrate contents > 50 mg/l at the measuring points for measuring the nitrate content in groundwater to 0 %



Modern accounting

Allocation of expenditures to the UN SDGs according to the 2023 Annual Report

Hesse is one of the few federal states that has published audited balance sheets in accordance with the German Commercial Code (HGB) since 2009. Starting with the publication of the 2022 Annual Report, Hesse has allocated all expenditures to the 17 SDGs¹⁾.



Not only the annual expenses, but also the future risks are important for a public administration. Future expenditures must be transparent to policymakers as well as voters and investors.

The allocation was done in the non-audit part of the annual report

Green & Sustainable Finance Cluster Germany e.V. Central Financial Market Initiative

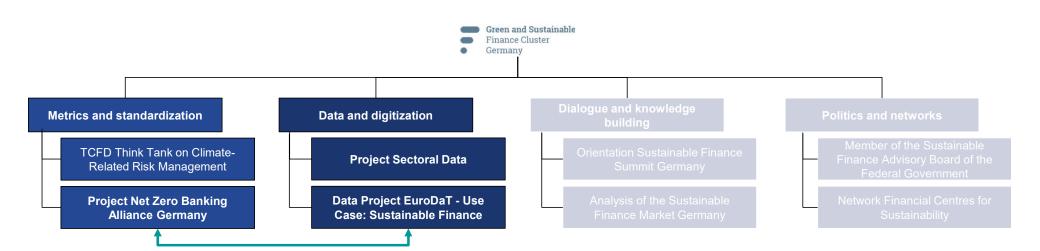
The Green & Sustainable Finance Cluster Germany (GSFC) aims to represent current activities of the German financial market in the field of sustainable finance and to identify possible innovation potentials.

The GSFC offers an outstanding exchange platform for sustainable financing issues through an exchange with all relevant actors – business, society, science, politics and authorities.

Data represents a central aspect of sustainable finance. The aim of the cluster is to address questions and topics such as alternative investment strategies and digital data requirements. In addition, the links between sustainability and the digitalisation of the financial sector are analysed.

The State of Hesse has been actively supporting the cluster since 2017 to ensure that the important European financial market is developed in accordance with rapidly evolving global standards.

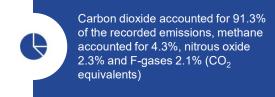
To stop climate change - the effects of which have long been felt - enormous investments are needed. For this reason, the Hessian government is taking up the idea that private capital should also be mobilized for the transformation. The cluster wants to further promote this movement.

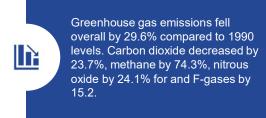


Hesse's greenhouse gas balance and CO₂e emissions Target indicators

State of Hesse (greenhouse gas balance 2022)

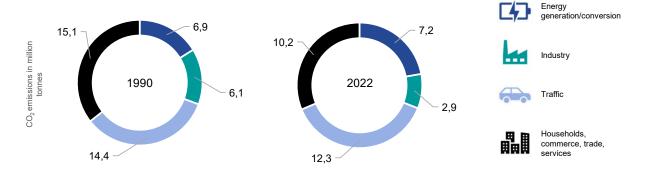






■ Carbon dioxide ■ Methane ■ Nitrous oxide ■ F-gases

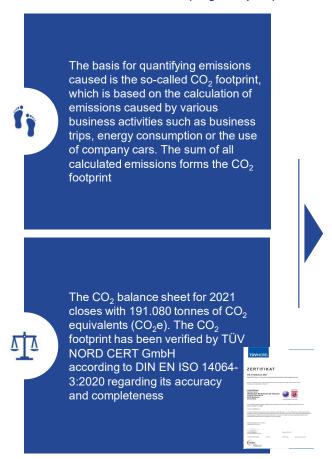
Development of energy-related CO₂e emissions split by sector

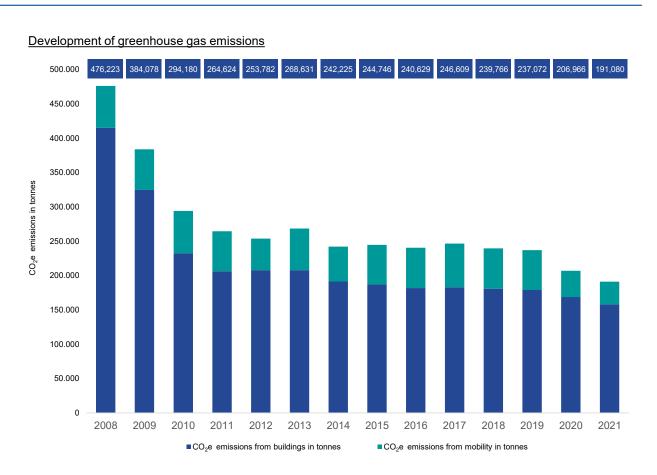


Source: https://landwirtschaft.hessen.de/klimaschutz/co2-und-treibhausgasbilanz

Hesse's greenhouse gas balance and CO₂e emissions Hessian State Administration

Hessian state administration (CO₂e-footprint)





Source: https://co2.hessen-nachhaltig.de/co2-bilanz-ergebnisse

UPDATED GREEN BOND FRAMEWORK FOR HESSE'S THIRD GREEN BOND

Updating the framework

The state of Hesse has published a new framework for the issuance of the third green bond. The framework is in line with the internationally recognized market standard, the ICMA Green Bond Principles 2021 (with the June 2022 Annex).

Hesse has commissioned ISS-Corporate, as an independent external agency, to prepare a second party opinion prior to the issuance of the third green bond.







First Hessian Green Bond	Second Hessian Green Bond	Third Hessian Green Bond
Refinancing of actual expenditure in 2018, 2019 and 2020	Refinancing of actual expenditure in 2021 and 2022	Refinancing of actual expenditure in 2023 and 2024
20 projects	30 projects (including 14 new projects)	31 projects (including 5 new projects)
Presentation of the sustainability strategy (as of 2021)	Presentation of the sustainability strategy (as of 2023)	Presentation of the updated sustainability strategy (as of 2025)
	 Assignment of EU environmental goals to the respective strategic priorities of the focus areas If necessary, IMWG will also review ESG controversies that could call into question the quality of the corresponding past-related spending of the green bond By complying with the EU legal system (e.g. international labour standards of the International Labour Organization), the Eligible Green Expenditures of the State of Hesse also meet requirements for minimum social standards 	 Determination of the eligibility criteria for eligible green expenditure Addition of new eligible green expenditures Assignment of activities to the respective strategic focal points of the fields of action Adjustment of departmental responsibilities Consideration of the Public Corporate Governance Code of the State of Hesse in the context of ESG risk management Considering, to the extent possible, the recommendations of the guidelines of the "ICMA Harmonized Framework for Impact Reporting" (June 2023)

Use of issue proceeds (1/2)

Eligible green expenditures are expenditures made by the State of Hesse that are defined as ecologically sustainable ("green") in the seven fields of action based on their relevance for the environment and climate.

Expenditure on armaments, oil and coal as fossil resources, shale gas / fracking, nuclear energy (e.g. production, transport, storage and electricity generation) or tobacco are explicitly excluded from being eligible.

Strategic priorities of the **ICMA GBP Categories** EU Environmental Description of eligible green expenditures **UN SDGs** focus areas Objective Expenditure to promote and improve sustainable and environmentally friendly transport systems Clean transportation - Financing of public transport associations to ensure comprehensive passenger transport in Hesse **Eco-friendly** Climate change Financing of specific public transport projects (e.g., station modernization, rail network expansion) public transport mitigation - Expenditures to promote more climate-friendly means of transport and its usage (e.g., job tickets, student tickets) - Funding and promotion of municipal measures to improve infrastructure for pedestrian and bicycle traffic Environmentally Expenditure that promotes reforestation and supports the removal of forest damage in order to strengthen the sustainable climate resilience of Hessian forests management of living - Expenditures to finance the 12-point plan for the reforestation of Hessian forests and to restore forest damage natural resources and Measures Protection and - Expenditures for environmental protection in the state forest (e.g., for the preservation of species and development of land use restoration of biodiversity concerning and ecosystems forests - Expenditures for nature conservation and landscape management in the national park - Expenditure on improving water retention in forests 42 Reforestation, pre-growing and substructure expenditure on site-appropriate flora Expenditures to reduce energy consumption and emissions from public buildings Clean transportation CO 2-neutral Energy efficiency - Expenditures to increase energy efficiency and to promote the use of renewable energy, as well as to promote energetic state Green buildings renovation of public buildings administration / Climate change - Investment program to implement the goals of the Hessian Energy Act mitigation energy - Charging infrastructure for e-vehicles at national offices, construction of additional bicycle parking areas for bicycles and efficiency of pedelecs public buildings - Installation of photovoltaic systems (PV systems) and solar thermal systems on roofs of state buildings

Use of issue proceeds (2/2)

Eligible green expenditures are expenditures made by the State of Hesse that are defined as ecologically sustainable ("green") in the seven fields of action based on their relevance for the environment and climate.

Expenditure on armaments, oil and coal as fossil resources, shale gas / fracking, nuclear energy (e.g. production, transport, storage and electricity generation) or tobacco are explicitly excluded from being eligible.

Strategic priorities of the **ICMA GBP Categories EU Environmental** Description of eligible green expenditures **UN SDGs** focus areas **Objective** Environmentally sustainable Protection and management of living natural **Organic** Expenditures to promote organic farming land resources and land use restoration of agriculture and Expenditures to promote low-carbon farming and climate-friendly and organic practices biodiversity and nature 15 the take Expenditures to finance advisory and information events for low-emission farming and horticultural businesses ecosystems conservation Expenditures to finance the Integrated Climate Protection Plan Hesse (ICPP 2025) and Climate Plan Hesse Clean transportation Climate change (2030) to achieve the climate targets and adapt to the consequences of climate change Energy efficiency Environmentally mitigation sustainable management of living Projects for the development and ramp-up of electric drives in public transport Protection and natural resources and land use Climate plan Expenditures for the creation of concepts and strategies in the field of sustainability and biodiversity restoration of Projects to implement the local mobility strategy to strengthen pedestrian and bicycle traffic biodiversity and Expenditures for ecological flood protection and floodplain restoration ecosystems **(** Measures to preserve and further develop biotope network systems Climate change Climate change adaptation Expenditures for the preservation and restoration of natural waters, improvement of the water quality and the adaptation Sustainable water and wastewater development of flood protection Sustainable management Sustainable use and (waste) water Measures to preserve and restore natural waters protection of water management Expenditures for the development of flood risk management plans and the construction of appropriate protection and marine resources Other expenditures related to environmental and climate protection in Hesse Clean transportation Further climate Establishment of the State Energy Agency with the tasks of consulting, education and public relations on the topics Climate change Climate change adaptation and of energy efficiency, renewable energies and climate protection mitigation Energy efficiency environmental Expenditures related to climate protection (e.g. implementation of climate protection projects, promotion of climate Climate change protection analyses / studies) adaptation measures Further development of the existing broadband infrastructure and creation of gigabit-capable infrastructures Expenditures for the support program "Energy Efficiency in Rental Housing (Energieeffizienz im Mietwohnungsbau)"

Framework for Hesse's third Green Bond Stringent selection of projects

The total proceeds raised will be allocated to eligible green expenditure for the financial years 2023 and 2024. These will be selected after a careful review by the Credit Unit and the Interministerial Working Group for the Green Bond Portfolio.

Interministerial Working Group (IMWG)

The IMWG combines expertise of multiple ministries and – chaired by the Hessian Ministry of Finance – consists of representatives from the debt management office as well as appointed ministerial representatives from the departments responsible for the respective relevant budget titles. They include:

Digitalisation / Innovation

Economics / Energy / Transport / Housing / Rural area Agriculture / Environment / Winegrowing / Forestry / Hunting / Homeland

Interior / Security / Homeland Protection Science / Research / Arts / Culture

Construction / Finance



IMWG makes the relevant decisions, including the validation of the framework for the third Green Bond of the State of Hesse, the assessment of suitability and the selection of suitable green expenditures, and the validation of the corresponding allocation and impact reports.

Project evaluation and selection process

To collect all the necessary data communicated by the respective ministries on projects that were the subject of the first and second Green Bonds, as well as on new projects with a particular scale of environmental expenditure

The debt management office establish an initial list of potential eligible green expenditures. These expenditures will be assessed in coordination with the interministerial working group for their suitability for the Green Bond portfolio

Only eligible green expenditures with an environmental or climate relevance are selected, if the meet the eligibility criteria for the use of proceeds

In addition, the eligible green expenditures should be assigned to one of the ICMA GBP categories, the funded projects should contribute to at least one of the UN SDGs and to an EU environmental goal

ESG risk management: Monitoring state expenditures to ensure that laws and regulations are complied with and that they can achieve the intended environmental impact

The qualification of the use of proceeds as eligible green expenditures as well as the allocation to the respective sustainability field are recorded and managed by the State in an internal tabular overview.

Management of proceeds and transparent reporting

The total amount of eligible green expenditure will exceed the total amount of the net proceeds raised by Hesse's third Green Bond (bond-by-bond approach). The State of Hesse intends to achieve full allocation within one year after the issuance of the respective Green Bond.

Management of proceeds



Intention to fully allocated Green Bond proceeds within one year after issuance



Until full allocation, unallocated proceeds are managed in accordance to the general liquidity guideline



Only funds from the Hessian state budget will be used, funds from the EU and the federal government are excluded from being eligible for allocation

Refinancing concept

- The allocation and monitoring of the proceeds is based on the state budget planning adhering to the principle of non-committed total coverage
- This means that by virtue of the statutory principles all state income is used to cover all state expenditures and that all cash inflow is used to cover all cash outflow
- The virtual allocation of the proceeds from the green state treasury bills to the eligible green expenditure is carried out by IMWG and recorded in an internal tabular overview

The State of Hesse is committed to transparent reporting (annual, starting from the year following the issuance, until full allocation) on the allocation and ecological impact of eligible green expenditure, and takes into considerations, to the extend possible, the recommendations from the "ICMA Harmonized Framework for Impact Reporting (June 2023)".

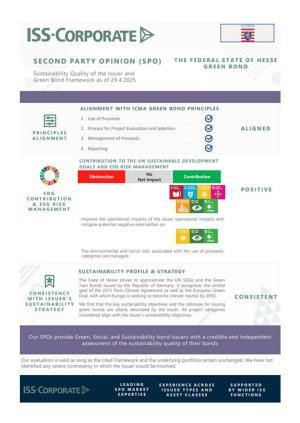
Reporting

- Allocation reporting: Details regarding allocation of the net proceeds to eligible green expenditures
- Impact reporting: Measurable impact of projects and measures financed by eligible green expenditures
- Allocation and impact report can be valid for several years and can be updated as needed. It contains
 the presentation of actual expenditure and key figures on an aggregated basis per expenditure category

Indicative impact and performance indicators			
Eco-friendly public transport	 Train-km performance in local rail passenger transport Number of measures funded per year Number of issued state tickets per year Number of tickets sold per year 		
Measures concerning forests	 Number of disbursed applications forest owners and timber marketing organizations (HVO) per year Amount allocated in EUR per ha operational area state forest Amount allocated in EUR per ha national park area 		
CO 2-neutral state administration / energy efficiency of public buildings	 CO2 savings in tons per year Number of measures funded per year Capacity in planning in kWp 		
Organic agriculture and nature conservation	 Number of customer contacts per year Hectares of extensive grassland management per year (commitment area) 		
Climate plan	Number of measures funded per year		
Sustainable (waste) water management	Number of measures funded per yearLength of developed waters in km		
Further climate and environmental protection measures	 Number of consultations per year Number of measures funded per year Percentage of households in Hesse with fiber optic connection (FTTB/H) with a performance of over 1.000 Mbit/s 		

Positive opinion received from ISS-Corporate

The State of Hesse has engaged ISS-Corporate as an independent reviewer, to prepare a second party opinion prior its third green bond.



Second Party Opinion



ISS-Corporate confirms that Hesse's Green Bond Framework is in line with the ICMA Green Bond Principles 2021 (with June 2022 Appendix 1)



Product and/or service-related use of proceeds categories individually contribute to at least one SDG



Other UoP categories improve the operational impacts of Hesse's borrowers and mitigate potential negative externalities of its sector on at least one SDG



Key sustainability objectives and the rationale for issuing green bonds are clearly described. All project categories considered align with Hesse's sustainability objectives

STATE OF HESSE'S THIRD GREEN BOND

Indicative allocation eligible green expenditure ICMA GBP, UN SDGs and European Environmental Objectives

Allocation to the strategic priorities of the focus areas				
in EUR million	2023	2024	Total	
Description	Actual Expenditure	Actual Expenditure	Actual Expenditure	
Eco-friendly public transport	634.01	672.43	1,306.44	
Measures concerning forests	67.80	51.55	119.35	
CO_2 -neutral state administration / energy efficiency of public buildings	46.53	57.08	103.61	
Organic farming and nature conservation	8.23	9.04	17.27	
Climate plan	13.63	16.62	30.25	
Sustainable (waste) water management	26.40	28.20	54.60	
Further climate and environmental protection measures	66.78	106.71	173.49	
Eligible green expenditures made	867.21	947.03	1,814.24	
Expected issuance volume for the Benchmark format up to max. EUR 1,50		EUR 1,500 mn		

third Green Bond

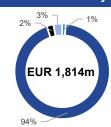
Breakdown by ICMA GBP1) Climate change adaptation Energy efficiency Environmentally sustainable management of living natural resources and land use EUR 1,814m Clean transportation Green Buildings - Sustainable water and wastewater management

Breakdown by UN SDGs¹⁾



- 6-Clean water and sanitation
- 7-Affordable and clean energy
- 9-Industry, Innovation and Infrastructure
- 11-Sustainable cities
- 13-Climate action
- 14-Life below water
- 15-Life on land

Breakdown by European Environmental Objectives¹⁾



- Climate change adaptation
- Climate change mitigation
- Sustainable use and protection of water and marine
- Protection and restoration of biodiversity and ecosystems

²⁷ 1) Assignment according to the lead category



> Case study – Eco-friendly public transport

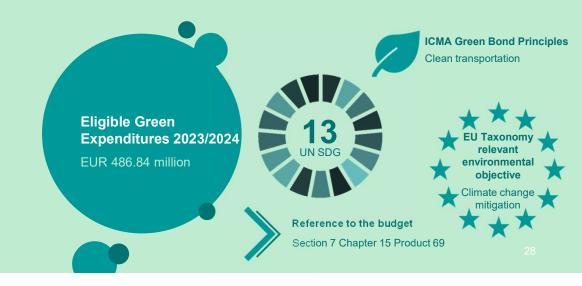
Promotion of public transport services incl. pupils and excursion ticket

The state supports the transport associations in their efforts to meet the challenges of the future in local public transport with a quality offensive.

The aim is to continuously strengthen and improve the timetable offerings in local public transport, both in quality and quantity, in line with demand and the public service mandate.

State funds provided to promote public transport services are intended to bridge the financing gap between fare revenues and the operational costs. This ensures that a corresponding level of passenger service can be maintained in Hesse.

The state is making its funding available to the three transport associations: Rhein-Main Verkehrsverbund (RMV), Nordhessischer Verkehrsverbund (NVV) and Verkehrsverbund Rhein-Neckar (VRN).



> Case study – Measures concerning forests

12-point forest plan

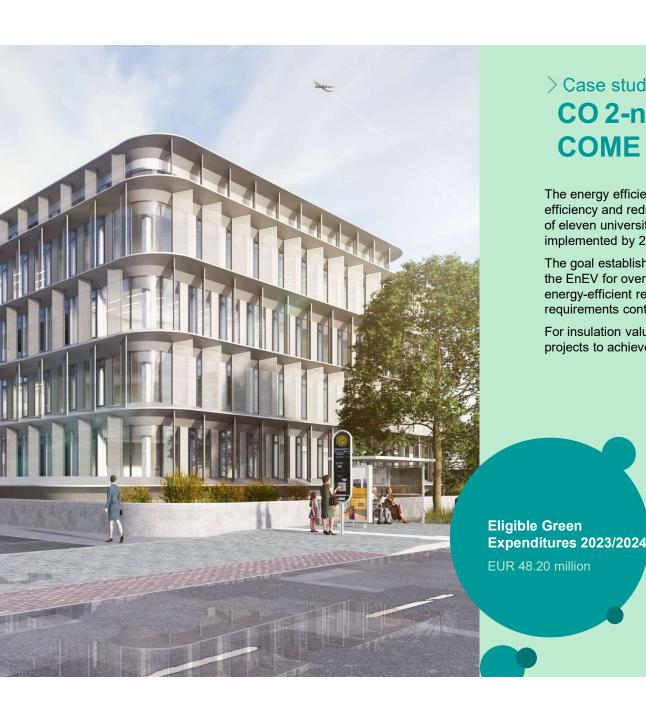
The 12-point Forest Plan promotes reforestation and ensures comprehensive support for the removal of forest damage caused by storms, drought and pests.

To combat climate change, Hesse aims to intensify the development of species-rich and climate-resilient mixed forests while also focusing on building the forests of the future. The state is offering financial support to achieve these goals.

Under the current funding guidelines, the Hessen-Forst State Office advises forest owners on financial assistance for managing their private or municipal forests. The primary objectives are to ensure the forest's functional and climate protection roles. This includes enhancing the ecological stability of forests, meeting Natura 2000 area requirements, and improving production, working, and marketing conditions in forestry.







> Case study – Energy efficiency of public buildings

CO 2-neutral state administration / COME Universities

The energy efficiency programme COME-Universities serves to sustainably increase energy efficiency and reduce CO₂ emissions in university buildings in Hesse. With the participation of eleven universities and colleges, approximately 40 construction projects are set to be implemented by 2025.

The goal established in 2018 was to meet at least the new building standards according to the EnEV for overall energy-efficient renovations. Despite the tightening of standards for energy-efficient renovations in the Building Energy Act (GEG 2020), the state's requirements continue to exceed the legal standards set by the GEG.

For insulation values of the building envelope, the energy efficiency programme requires projects to achieve an improvement beyond the legal requirements.



> Case study – Sustainable (waste) water management **Renaturation**

The implementation of the Water Framework Directive is progressing rapidly in Hesse. The objective is to ensure that all water bodies achieve a good ecological condition by 2027, in line with EU requirements.

To further this goal, the "100 Wild Streams for Hesse" program was initiated. This program aims to select and renature 100 specific streams in Hesse, serving as models for ecological restoration.

These renaturation measures are designed to enhance water structure and improve ecological connectivity. By restoring Hessian streams to near-natural habitats, the program significantly contributes to environmental health. Additionally, these efforts boost biological diversity both in and around the water bodies.







> Case Study – Organic Farming and Nature Conservation

Education, advice and technical information for agriculture and horticulture

Agricultural and horticultural businesses are made aware of climate protection and adaptation to climate change through advice, specialist events and publications. Expertise and insights on reducing greenhouse gas emissions and adapting to changing climatic conditions are conveyed in a customer-oriented and practical manner using a variety of methods, media, and platforms.

In addition to information events, seminars, workshops, advisory information or field inspections, individual farm consultations are provided directly on site. In the agricultural or horticultural business, individual adaptation options to climate change are developed, and individual climate balances are worked out by LLH consultants together with the farm management.



Eligible Green Expenditure 2023/2024

EUR 9.85 million

> Case study – climate plan

Promoting the development of sustainable (and climate-neutral) universities

Universities and colleges are among the major energy consumers in public properties. At the same time, the research and educational institutions are key drivers of innovation.

To address this, the State of Hesse promotes the creation of concepts and strategies in sustainability and biodiversity, aiming for a CO2-neutral state administration. This includes establishing sustainability offices (e.g., green offices), developing sustainability and mobility strategies, implementing energy management and environmental management systems, and conducting analyses and concepts for climate-neutral universities.







> Case study – Further climate and environmental protection measures

Broadband expansion

The aim of gigabit funding is to further develop the existing broadband infrastructure and create gigabit-capable infrastructures to enable innovation, competition, employment and sustainable economic growth in all regions.

The increased use of fiber-optic networks can significantly reduce the energy consumption of digital infrastructure, thereby contributing to CO2 reduction. Fiber-optic networks also outperform conventional copper networks in terms of sustainability, considering power consumption and the weight of system technology per user.

By 2025, gigabit-capable connections are expected to be available nationwide in Hesse, with fiber optics to the home by 2030.



APPENDIX

Project overview (1/2)

#	Project	Green expenditures in million EUR	Impact indicator	Key figure for 2023	Key figure for 2024	UN SDG
1	Promotion of public transport services including pupils and excursion tickets	486.84	train-km performance in local rail passenger transport	58.4 million km ¹⁾	61.1 million km ¹⁾	13 322
2	Promotion of public transport services	440.16	train-km performance in local rail passenger transport	58.4 million km ¹⁾	61.1 million km ¹⁾	13 350
3	Financing of local transport facilities	162.42	Number of measures funded per year	55	77	19 857
4	LandesTicket Hessen	122.39	Number of state tickets issued per year	172,432	175,504	13 250
5	Broadband expansion	104.54	Percent of households with a fiber-optic connection (FTTB/H) with a performance of over 1,000 Mbit/s	21.13	27.54	9 *******
6	12-point forest plan (Future Forest)	84.85	Number of disbursed applications forest owners and timber marketing organizations (HVO) per year	1,498	173	15 # <u>∳</u> ≭
7	Funding of measures in accordance with the Mobility Promotion Act/public transport sector	71.15	Number of measures funded per year	49	84	13 355
8	CO2-neutral state administration, COME universities	48.20	CO2 savings in tons per year	544.07	681.36	alan
9	Renaturation - Implementation of the European Water Policy in the field of water protection for the preservation and improvement of water quality	39.34	Length of developed waters in km	47.50	74.26	14 "
10	State Energy Agency	34.99	Number of consultations per year	3,251	3,626	Tomorrow .
11	Expansion of public transport and cycling – financing and promotion of measures in accordance with the guideline of the State of Hesse for the promotion of local mobility	23.49	Number of measures funded per year	73	92	-III
12	Increasing energy efficiency and the use of renewable energies, energy-efficient renovation of municipal buildings	19.62	Number of measures funded per year	45	46	Alda.
13	Supply to the Kellerwald-Edersee National Park – for nature conservation and landscape conservation (only national park areas)	17.79	Amount allocated in EUR per ha national park area	1,202.00	1,112.00	15 # <u>\$\psi^2</u>
14	Transfer to the Hessen-Forst State Office – for environmental protection in the state forest (excluding the state national park areas)	16.71	Amount allocated in EUR per ha operational area state forest	15.64	15.92	15 :
15	Climate Directive Investment Measures	15.71	Number of measures funded per year	78	67	13 350
16	Municipal flood protection (retention basins)	12.29	Number of measures funded per year	20	9	13 300

¹⁾ The expenditures of project 1 and project 2 will be used for the same rail network. As such, the same impact figures are shown for both projects.

Project overview

(2/2)

#	Project	Green expenditures in million EUR	Impact indicator	Key figure for 2023	Key figure for 2024	UN SDG
17	CO2-neutral state administration, energy efficiency, building standards for new buildings and renovation measures	12.08	CO2 savings in tons per year	675.71	576.22	.Ida
18	CO2-neutral state administration, COME Mobility	11.87	Number of charging points installed	299	565	\$
19	Climate Directive non-investment measures	10.25	Number of measures funded per year	49	39	18.25
20	Education, advice and technical information for agriculture and horticulture	9.85	Number of customer contacts per year	74,025	121,022	13 757
21	CO2-neutral state administration, COME Solar	9.62	Realized installed capacity (kWp)	748	1,387	7 ######
22	Promoting the development of sustainable (and climate-neutral) universities	9.08	Number of measures funded per year	31	31	13 222
23	Funding programme "Energy efficiency in rental housing"	8.00	Subsidized housing units per year	160	877	# I 4
24	HALM grassland extensification	7.42	Hectares of extensive grassland management per year (commitment area)	61,867.00	70,323.00	15
25	Climate-friendly transport transition	7.33	Number of measures funded per year	69	30	Alda
26	Strengthening pedestrian and bicycle traffic	7.12	Number of measures funded per year	43	28	11: AB4m
27	Improving biotope networks for climate-sensitive species	6.73	Number of measures funded per year	53	80	15
28	Improving water retention in forests	4.63	Number of measures funded per year	4	4	15
29	Building climate-resilient forests	4.60	Number of measures funded per year	6	6	15 :
30	Wastewater treatment plant improvement (4th purification stage)	2.97	Number of measures funded per year	2	5	6 BANKARIN
31	CO2-neutral state administration	2.22	CO2 savings in tons per year	160.000	150.000	n=====





Promotion of public transport services including pupils and excursion tickets

Hesse's focus area

Eco-friendly public transport

ICMA GBP Category

Clean transportation

UN SDG

13-Climate Action

EU environmental objectives

Climate change mitigation

Description

- The additional free state funds provided to promote public transport services are intended to ensure a corresponding passenger service, continuously strengthen it and improve it in line with demand
- In 2024, about 48.01% of the total expenditure of the three Hessian transport associations on means of transport was distributed on rails and about 51.99% on other public transport
- From 2023, this project will also include the expenses for the Hesse school and excursion ticket (project no. 6 of the 2nd Green Bond 2023)

Eligible Green Expenditures

2023: EUR 222.92 million2024: EUR 263.92 million

Expected impact

Train km performance in local rail passenger transport:

2023 (actual): 58,387,641*2024 (plan): 61,095,258*

Reference to the budget (2023/2024)

Section 7 Chapter 15 Product 69



^{*}The expenditures of project 1 and project 2 will be used for the same rail network. As such, the same impact figures are shown for both projects.

Green Bond 2023



Promotion of public transport services

Hesse's focus area

Eco-friendly public transport

ICMA GBP Category

Clean transportation

UN SDG

13-Climate Action

EU environmental objectives

Climate change mitigation

Description

- The additional free state funds provided to promote public transport services are intended to ensure a corresponding passenger service, continuously strengthen it and improve it in line with demand
- In 2024, about 48.01% of the total expenditure of the three Hessian transport associations on means of transport was distributed on rails and about 51.99% on other public transport

Eligible Green Expenditures

■ 2023: EUR 203.58 million

• 2024: EUR 236.58 million

Expected impact

Train km performance in local rail passenger transport:

2023 (actual): 58,387,641*

• 2024 (plan): 61,095,258*

Reference to the budget (2023/2024)

Section 17 (7) Chapter 30 Product 22



^{*}The expenditures of project 1 and project 2 will be used for the same rail network. As such, the same impact figures are shown for both projects.

Financing of local transport facilities





Hesse's focus area

Eco-friendly public transport

ICMA GBP Category

Clean transportation

UN SDG

13-Climate Action

EU environmental objectives

Climate change mitigation

Description

- The funds are used to co-finance public transport funding projects as well as the projects of the Municipal Transport Financing Act and local rail passenger transport, including S-Bahn projects
- These measures include, for example, the construction of the Regionaltangente West light rail line, the U2 extension, and the four-track expansion of the S6

Eligible Green Expenditures

- 2023: EUR 91.41 million
- 2024: EUR 71.01 million

Expected impact

Number of measures financed per year:

- **2023: 55**
- **2024: 77**

Reference to the budget (2023/2024)

Section 17 (7) Chapter 30 Product 24



LandesTicket Hessen







Hesse's focus area

Eco-friendly public transport

ICMA GBP Category

Clean transportation

UN SDG

13-Climate Action

EU environmental objectives

Climate change mitigation

Description

- Introduction of a Hesse-wide job ticket (free travel entitlement) for all state employees
- Offer and incentive for each individual, on their own responsibility, but without financial contribution, to reduce individual traffic and thus make a contribution to sustainable environmental and climate protection
- The objectives is to shift to low-emission modes of transport

Eligible Green Expenditures

• 2023: EUR 58.39 million

• 2024: EUR 64.00 million

Expected impact

Number of state tickets issued per year | CO2 savings in tons per year:

2023: 172,432 2023: /

2 2024: 175,504 2024: 13,756

Reference to the budget (2023/2024)

Section 3 Chapter 1 Product 7



¹⁾ The State of Hesse commissioned an external evaluation of the climate impact of the "LandesTicket Hessen" ticket. This evaluation was conducted by infas Institut für angewandte Sozialwissenschaften GmbH in 2024 and determined an expected CO2 savings of 13,756 tons CO2e per year

Broadband expansion



Hesse's focus area

Further climate and environmental protection measures

ICMA GBP Category

Energy efficiency

UN SDG

9-Industry, Innovation and Infrastructure

EU environmental objectives

Climate change mitigation

Description

- The goal of gigabit funding is to enhance the existing broadband infrastructure and establish gigabit-capable networks to foster innovation, competition, employment, and sustainable economic growth across all regions.
- By 2025, gigabit-capable connections should be available throughout Hesse, with fiber optic connections to homes by 2030.

Eligible Green Expenditures

- 2023: EUR 26.51 million
- 2024: EUR 78.03 million

Expected impact

Percent of households in Hesse with fiber optic connection (FTTB/H):

- **2023: 21.13%**
- **2024**: 27.54%

Reference to the budget (2023/2024)

Section 14 Chapter 20 Product 1



12-point forest plan ("Zukunft Wald")







Hesse's focus area

Measures concerning forests

ICMA GBP Category

Environmentally sustainable management of living natural resources and land use

UN SDG

15-Life on Land

EU environmental objectives

Climate change mitigation

Description

- The 12-point Forest Plan promotes reforestation and ensures comprehensive support for the removal of forest damage caused by storms, drought and pests
- In order to curb climate change, Hesse has set itself the goal of intensifying the development of species-rich and climate-stable mixed forests and building the forest of tomorrow

Eligible Green Expenditures

- 2023: EUR 50.25 million
- 2024: EUR 34.60 million

Expected impact

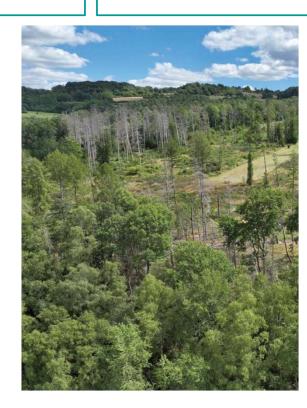
Number of disbursed applications forest owners and timber marketing organizations (HVO) per year:

- **2023**: 1,498
- **2024: 173**

Reference to the budget (2023/2024)

Section 9 Chapter 11 Product 3

Section 9 Chapter 22 Products 8, 10









Funding of measures in accordance with the Mobility Promotion Act / Public Transport

Hesse's focus area **ICMA GBP Category UN SDG** EU environmental objectives **Eco-friendly public transport Climate change mitigation** Clean transportation 13-Climate Action Straßen- und Verkehrsmanagement ■ The initiative promotes measures to improve traffic conditions and foster sustainable mobility development in Hesse's municipalities Verkehrsinfrastrukturförderung • In particular, the construction and expansion of rail infrastructure and **Description** Informationsblatt acceleration measures for public transport are planned für Bushaltestellen • Funds for municipal road construction are explicitly excluded for an allocation for the Green Bond Regelungen für Förderanträge 2023: EUR 45.75 million **Eligible Green Expenditures** • 2024: EUR 25.40 million Number of measures financed per year: **Expected impact 2023: 49 2024**: 85 Reference to the Section 7 Chapter 15 Product 68 budget (2023/2024)





CO2-neutral state administration, COME universities

Hesse's focus area

CO2-neutral state administration / energy efficiency of public buildings

ICMA GBP Category

Energy efficiency

UN SDG

11-Sustainable Cities and Communities

EU environmental objectives

Climate change mitigation

Description

- The energy efficiency program COME-Universities serves to sustainably increase energy efficiency and CO2 savings in university buildings in Hesse
- The state's requirements are above the legal energy standard according to GEG 2020
- With the participation of eleven universities and colleges, around 40 construction projects are to be implemented by 2025

Eligible Green Expenditures

- 2023: EUR 21.40 million
- 2024: EUR 26.80 million

Expected impact

CO2 savings in tons per year:

- **2**023: 544
- **2024**: 681

Reference to the budget (2023/2024)

Section 18 Chapter 1 Product 13









Renaturation - Implementation of the European Water Policy in the field of water protection for the preservation and improvement of water quality

Hesse's focus area

Sustainable (waste) water management

ICMA GBP Category

Sustainable water and wastewater management

UN SDG

14-Life Below Water

EU environmental objectives

Sustainable use and protection of water and marine resources

Description

- For the implementation of the Water Framework Directive in Hesse, all water bodies are to be brought into good ecological status by 2027 within the framework of EU requirements
- Renaturation measures improve the water structure and ecological continuity
- In order to further advance the realization of the goal, the program "100 Wild Streams for Hesse" was launched, among other things. In the course of the programme, 100 Hessian streams will be specifically selected and renaturalised as models

Eligible Green Expenditures

- 2023: EUR 16.40 million
- 2024: EUR 22.94 million

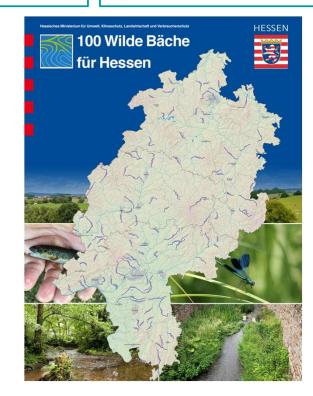
Expected impact

Length of developed waterways in km:

- **2023: 47.50**
- **2024**: 74.26

Reference to the budget (2023/2024)

Section 17 (9) Chapter 41 Product 38



State Energy Agency







Hesse's focus area

Further climate and environmental protection measures

ICMA GBP Category

Energy efficiency

UN SDG

7-Affordable and Clean Energy

EU environmental objectives

Climate change mitigation

Description

- On behalf of the state government, the Hesse State Energy Agency (LEA) takes on central tasks in the implementation of the energy transition and climate protection
- The LEA offers information, initial consultations and accompanying support in the selection and implementation of measures for climate protection, energy efficiency, transport and local mobility, energy saving or the expansion of renewable energies in one's own environment

Eligible Green Expenditures

- 2023: EUR 18.08 million
- 2024: EUR 16.91 million

Expected impact

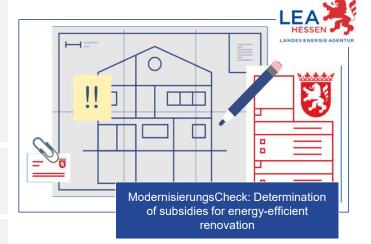
Number of consultations per year:

- **2023**: 3,251
- **2024**: 3,626

Reference to the budget (2023/2024)

Section 7 Chapter 5 Product 5

Section 9 Chapter 21 Product 2a









Expansion of public transport and cycling

Hesse's focus area

Eco-friendly public transport

ICMA GBP Category

Clean transportation

UN SDG

11-Sustainable Cities and Communities

EU environmental objectives

Climate change mitigation

Description

- The State of Hesse provides financial support for municipal initiatives aimed at enhancing walking and cycling infrastructure, in line with its local mobility promotion guidelines.
- Funding is allocated for structural improvements to boost the attractiveness and safety of pedestrian and bicycle traffic, particularly through the reconstruction of junctions along cycle routes and pedestrian networks.

Eligible Green Expenditures

■ 2023: EUR 11.97 million

• 2024: EUR 11.52 million

Expected impact

Number of measures financed per year:

2023: 73

2024: 92

Reference to the budget (2023/2024)

Section 17 (7) Chapter 30 Product 51









Increasing energy efficiency and the use of renewable energies, energyefficient renovation of municipal buildings

Hesse's focus area

CO2-neutral state administration / energy efficiency of public buildings

ICMA GBP Category

Energy efficiency

UN SDG

11-Sustainable Cities and Communities

EU environmental objectives

Climate change mitigation

Description

- Funding of municipalities in accordance with the Municipal Energy Directive for the implementation of the objectives of the Hessian Energy Act
- The state supports investment measures in municipal buildings aimed at reducing final energy consumption, increasing the use of renewable energies, enhancing highly efficient combined heat and power generation, and limiting climate-relevant emissions.

Eligible Green Expenditures

- 2023: EUR 7.55 million
- 2024: EUR 12.07 million

Expected impact

Number of measures financed per year:

- **2023: 45**
- **2024: 46**

Reference to the budget (2023/2024)

Section 17 (7) Chapter 30 Product 50



Supply to the Kellerwald-Edersee National Park







Hesse's focus area

Measures concerning forests

ICMA GBP Category

Environmentally sustainable management of living natural resources and land use

UN SDG

15-Life on Land

EU environmental objectives

Protection and restoration of biodiversity and ecosystems

Description

- The State of Hesse finances nature conservation and landscape conservation in the Kellerwald-Edersee National Park.
- The goal is to support the natural development of habitats within the park, including areas that are part of the UNESCO World Heritage Beech Forests, and to protect the biodiversity found there. The national park also contributes significantly to sustainable development in the region, offering extensive opportunities for education and nature experiences.

Eligible Green Expenditures

• 2023: EUR 9.24 million

• 2024: EUR 8.55 million

Expected impact

Amount allocated in EUR per ha national park area:

2023: 1,202.002024: 1,112.00

Reference to the budget (2023/2024)

Section 9 Chapter 11 Product 4









Feed to the Hessen-Forst state enterprise

Hesse's focus area

Measures concerning forests

ICMA GBP Category

Environmentally sustainable management of living natural resources and land use

UN SDG

15-Life on Land

EU environmental objectives

Climate change mitigation

Description

- The Hessen-Forst state enterprise ensures multifunctional sustainable forest management in Hesse
- The project finances environmental protection in the state forest. These services include, among other things:
 - Conservation of species and development of biotopes outside the designated protected areas
 - Climate change mitigation and adaptation
 - Versatile forest structure
- Aspects of recreational use are not included in the green bond

Eligible Green Expenditures

- 2023: EUR 8.31 million
- 2024: EUR 8.40 million

Expected impact

Amount allocated in EUR per ha operational area state forest:

- **2**023: 15.64
- **2024**: 15.92

Reference to the budget (2023/2024)

Section 9 Chapter 11 Product 3



Climate Change Directive Investment Measures





Hesse's focus area

Further climate and environmental protection measures

ICMA GBP Category

Adaptation to climate change

UN SDG

13-Climate Action

EU environmental objectives

Climate change mitigation

Description

 The benefits of the funding product are intended to provide municipalities with incentives to plan and implement municipal climate protection projects and other measures of the Hesse Climate Plan

Eligible Green Expenditures

2023: EUR 9.77 million

• 2024: EUR 5.94 million

Expected impact

Number of measures financed per year:

2023: 78

2024: 67

Reference to the budget (2023/2024)

Section 17 (9) Chapter 41 Product 40









Municipal flood protection (retention basins)

Hesse's focus area

Sustainable (waste) water management

ICMA GBP Category

Adaptation to climate change

UN SDG

13-Climate Action

EU environmental objectives

Climate change adaptation

Description

- Funding to municipalities for flood protection as well as for the planning, expansion or rehabilitation of hydraulic engineering facilities and measures that serve the drainage of dike-protected areas
- Implementation of ecological flood protection measures and floodplain restoration as well as creation of concepts for flood and heavy rain events

Eligible Green Expenditures

■ 2023: EUR 7.60 million

■ 2024: EUR 4.69 million

Expected impact

Number of measures financed per year:

2023: 20

2024: 9

Reference to the budget (2023/2024)

Section 17 (9) Chapter 41 Product 38









CO2-neutral state administration, energy efficiency, building standards for new buildings and renovation measures

Hesse's focus area

CO2-neutral state administration / energy efficiency of public buildings

ICMA GBP Category

Eco-friendly buildings

UN SDG

11-Sustainable Cities and Communities

EU environmental objectives

Climate change mitigation

Description

- The state of Hesse is striving for a climate-neutral state administration by 2030. From 2023, the standards according to the new Hessian Energy Act will apply
- For new buildings, the standard "Efficiency Buildings (Federal Government) 40" must be observed, and for renovations, the standard "Efficiency Buildings (Federal Government) 55" must be observed. This means that the permissible primary energy requirement under the Building Energy Act must be undercut by at least 60 or 45 percent

Eligible Green Expenditures

2023: EUR 6.52 million

• 2024: EUR 5.56 million

Expected impact

CO2 savings in tons per year:

2023: 676

2024: 576

Reference to the budget (2023/2024)

Section 18



CO2-neutral state administration, COME Mobility





Hesse's focus area

CO2-neutral state administration / energy efficiency of public buildings

ICMA GBP Category

Clean transportation

UN SDG

9-Industry, Innovation and Infrastructure

EU environmental objectives

Climate change mitigation

Description

- As part of the "COME-Mobility" program of the CO2-neutral state administration, the state company is driving the change to an e-vehicle fleet
- By 2023, 1,000 bicycle parking spaces are to be built on state properties.
 Financial support will also be provided for bicycle racks and charging infrastructure

Eligible Green Expenditures

- 2023: EUR 5.50 million
- 2024: EUR 6.37 million

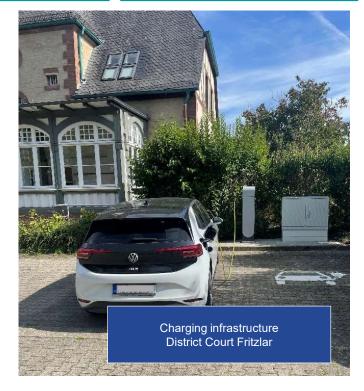
Expected impact

Number of charging points installed:

- **2023**: 299
- **2024**: 565

Reference to the budget (2023/2024)

Section 18 Chapter 1 Product 15







Climate Change Directive Non-Investment Measures

Hesse's focus area

Further climate and environmental protection measures

ICMA GBP Category

Adaptation to climate change

UN SDG

13-Climate Action

EU environmental objectives

Climate change mitigation

Description

- Promotion of measures to reduce climate-damaging greenhouse gases by improving climate protection, adapting to climate change and increasing the use of renewable energies
- Non-investment measures include studies and analyses to determine the climate-related municipal hazard potential, climate analyses, simulations and analyses of runoff routes and necessary measures in the event of heavy precipitation, and municipal information measures on climate protection and climate adaptation

Eligible Green Expenditures

• 2023: EUR 5.92 million

• 2024: EUR 4.33 million

Expected impact

Number of measures financed per year:

2023: 49

2024: 39

Reference to the budget (2023/2024)

Section 9 Chapter 21 Product 2a/b









Education, advice and technical information for agriculture and horticulture

Hesse's focus area

Organic agriculture and nature conservation

ICMA GBP Category

Environmentally sustainable management of living natural resources and land use

UN SDG

13-Climate Action

EU environmental objectives

Protection and restoration of biodiversity and ecosystems

Description

- Agricultural and horticultural businesses are sensitised to issues of climate protection and adaptation to climate change through advice, specialist events and publications
- Expertise on reducing greenhouse gas emissions and adapting to changing climatic conditions is imparted in a customer-oriented and practical manner using a variety of methods, media and platforms
- In addition, individual company consultations are provided directly on site. In the
 agricultural or horticultural business, farm-specific adaptation options to climate change
 are developed and farm-specific climate balances are worked out together with the farm
 management

Eligible Green Expenditures

2023: EUR 4.52 million

• 2024: EUR 5.33 million

Expected impact

Number of customer contacts per year:

2023: 74,025

2024: 121,022

Reference to the budget (2023/2024)

Section 9 Chapter 11 Product 1



Green Bond 2023



CO2-neutral state administration, COME Solar

Hesse's focus area

CO2-neutral state administration / energy efficiency of public buildings

ICMA GBP Category

Energy efficiency

UN SDG

7-Affordable and Clean Energy

EU environmental objectives

Climate change mitigation

Description

- As part of the program, state offices managed by the Hesse State Office for Construction and Real Estate will be equipped with photovoltaic and solar thermal systems.
- The primary goal is to significantly enhance the use of solar energy for both heat generation and self-produced electricity in state properties.

Eligible Green Expenditures

2023: EUR 4.50 million

• 2024: EUR 5.12 million

Expected impact

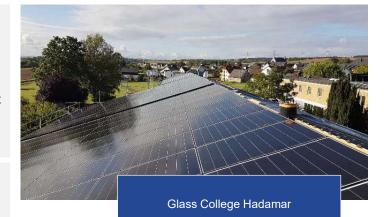
Realized installed capacity (kWp):

2023: 748

2024: 1,387

Reference to the budget (2023/2024)

Section 18 Chapter 1 Product 15









Promoting the development of sustainable (and climate-neutral) universities

Hesse's focus area

ICMA GBP Category

UN SDG

EU environmental objectives

Climate plan

Energy efficiency

13-Climate Action

Climate change mitigation

Description

- Universities and colleges are significant energy consumers among public properties. The state of Hesse supports the development of sustainability and biodiversity strategies, aiming for a CO2-neutral state administration.
- Measures include establishing sustainability offices, creating sustainability and mobility strategies, developing energy and environmental management systems, and conducting analyses and concepts for climate-neutral universities.

Eligible Green Expenditures

2023: EUR 4.58 million

• 2024: EUR 4.50 million

Expected impact

Number of measures financed per year:

2023: 31

2024: 31

Reference to the budget (2023/2024)

Section 15 Chapter 2 Product 7







Funding programme "Energy efficiency in rental housing"

Hesse's focus area

Further climate and environmental protection measures

ICMA GBP Category

Eco-friendly buildings

UN SDG

11-Sustainable Cities and Communities

EU environmental objectives

Climate change mitigation

Description

- The program is designed to offer additional investment incentives and support for energy-efficient renovations in rental housing.
- Promotion of investment projects (energy-efficient modernisation and new construction) in rented apartment buildings on the basis of benchmark values, including the corresponding KfW programmes ("Energy-efficient refurbishment" or "Energy-efficient construction").

Eligible Green Expenditures

- 2023: EUR 6.50 million
- 2024: EUR 1.50 million

Expected impact

Subsidized housing units per year:

- **2023**: 160
- **2024: 877**

Reference to the budget (2023/2024)

Section 7 Chapter 5 Product 25



HALM grassland extensification







Hesse's focus area

Organic agriculture and nature conservation

ICMA GBP Category

Environmentally sustainable management of living natural resources and land use

UN SDG

15-Life on Land

EU environmental objectives

Protection and restoration of biodiversity and ecosystems

Description

- Grassland extensification (HALM D.1) promotes the extensive cultivation of permanent grassland areas
- For this purpose, farmer refrains from using fertilisers and pesticides as well as
 from turning and loosening soil cultivation. To maintain the openness of the area
 and prevent ecological succession, the land must be mowed or grazed at least
 once annually during the growing season.

Eligible Green Expenditures

- 2023: EUR 3.71 million
- 2024: EUR 3.71 million

Expected impact

Hectares of extensive grassland management per year (commitment area):

- **2023**: 61,867
- **2024**: 70,323

Reference to the budget (2023/2024)

Section 9 Chapter 23 Product 23f



Climate-friendly transport transition





Hesse's focus area

Climate plan

ICMA GBP Category

Clean transportation

UN SDG

11-Sustainable Cities and Communities

EU environmental objectives

Climate change mitigation

Description

- To implement the transport turnaround in Hesse, various measures are being undertaken. These include projects to develop and scale up electric drives, establish a sustainable and climate-friendly passenger and freight transport system, promote sustainable mobility plans in municipalities, and conduct public relations work.
- Regarding subsidies for car sharing within pilot and demonstration projects in e-mobility, only fully electric vehicles that meet the specified emission intensity criteria are funded. Plug-in hybrids are not eligible for funding.

Eligible Green Expenditures

• 2023: EUR 3.54 million

• 2024: EUR 3.79 million

Expected impact

Number of measures financed per year:

2023: 69

2024: 30

Reference to the budget (2023/2024)

Section 7 Chapter 15 Product 73



Strengthening pedestrian and bicycle traffic





Hesse's focus area

ICMA GBP Category

Clean transportation

UN SDG

11-Sustainable Cities and Communities

EU environmental objectives

Climate change mitigation

Description

Climate plan

- Projects for the implementation of the local mobility strategy to strengthen walking and cycling. To this end, the following measures are to be implemented in particular:
 - Strengthening intermodal and climate-friendly services
 - Strengthening mobility in rural areas
 - Promotion of climate-friendly local mobility
 - Centre for "School Mobility Management" and the work of the Working Group on Local Mobility (AGNH)

Eligible Green Expenditures

- 2023: EUR 2.23 million
- 2024: EUR 4.89 million

Expected impact

Number of measures financed per year:

- **2023: 43**
- **2024**: 28

Reference to the budget (2023/2024)

Section 7 Chapter 15 Product 74





Improving biotope networks for climate-sensitive species

Hesse's focus area

Climate plan

ICMA GBP Category

Environmentally sustainable management of living natural resources and land use

UN SDG

15-Life on Land

EU environmental objectives

Protection and restoration of biodiversity and ecosystems

Description

- The primary objective of this initiative is to fund large-scale, cross-border, and exemplary biotope network projects. Despite numerous collaborative efforts in the past, significant gaps remain in the biotope network, particularly in light of the unique challenges posed by climate change. The EU also advocates for the creation of ecological corridors as part of its 30% protection target.
- This measure will prioritize technically and organizationally ambitious projects. To achieve
 this, existing barriers to such projects must be identified and systematically eliminated.
 Additionally, projects within floodplains will be designed to enhance ecological flood
 protection.

Eligible Green Expenditures

2023: EUR 3.29 million

• 2024: EUR 3.44 million

Expected impact

Number of measures financed per year:

2023: 53

2024: 80

Reference to the budget (2023/2024)

Section 9 Chapter 21 Product 2d



Improving water retention in forests



Hesse's focus area

Measures concerning forests

ICMA GBP Category

Environmentally sustainable management of living natural resources and land use

UN SDG

15-Life on Land

EU environmental objectives

Protection and restoration of biodiversity and ecosystems

Description

- The initiative encompasses preparatory and operational measures in forests to enhance water retention and availability.
- Key operational efforts will focus on forest paths, where wet troughs and water pockets will be established.
- Additionally, the restoration of flowing and still waters, as well as forest moors, aims to slow runoff and maintain water availability in these areas. Creating or restoring extinguishing ponds will also ensure sufficient water supply for forest firefighting.

Eligible Green Expenditures

• 2023: EUR 1.72 million

• 2024: EUR 2.91 million

Expected impact

Number of measures financed per year:

2023: 4

2024: 4

Reference to the budget (2023/2024)

Section 9 Chapter 21 Product 2d



Building climate-resilient forests



Hesse's focus area

Measures concerning forests

ICMA GBP Category

Environmentally sustainable management of living natural resources and land use

UN SDG

15-Life on Land

EU environmental objectives

Protection and restoration of biodiversity and ecosystems

Description

- The primary focus of this initiative is to reforest areas left barren by the droughts of 2018 to 2020 and pest infestations.
- The goal is to establish stable mixed forests suited to their locations, featuring a high proportion of climate-resilient oaks, noble deciduous trees, and silver firs. Although reforesting with these species requires significantly more effort, it greatly enhances biodiversity and other forest functions.
- This process will be supported by research and monitoring to refine the measures further. Additionally, the initiative includes constructing or upgrading 100 kilometers of forest edges to improve the internal forest climate.

Eligible Green Expenditures

• 2023: EUR 2.11 million

• 2024: EUR 2.49 million

Expected impact

Number of measures financed per year:

2023: 6

2024: 6

Reference to the budget (2023/2024)

Section 9 Chapter 21 Product 2d





Wastewater treatment plant improvement (4th purification stage)

Hesse's focus area

Sustainable (waste) water management

ICMA GBP Category

Sustainable water and wastewater management

UN SDG

6-Clean water and sanitation

EU environmental objectives

Sustainable use and protection of water and marine resources

Description

- The initiative involves implementing advanced wastewater treatment measures, such as reducing phosphorus and nitrogen inputs and constructing a fourth treatment stage at sewage plants, particularly where trace substances may threaten drinking water quality.
- Municipalities are required to implement these measures, with support from voluntary state contributions.

Eligible Green Expenditures

• 2023: EUR 2.40 million

• 2024: EUR 0.57 million

Expected impact

Number of measures financed per year:

2023: 2

2024: 5

Reference to the budget (2023/2024)

Section 17 (9) Chapter 41 Product 38



CO2-neutral state administration





Hesse's focus area

CO2-neutral state administration / energy efficiency of public buildings

ICMA GBP Category

Energy efficiency

UN SDG

11-Sustainable Cities and Communities

EU environmental objectives

Climate change mitigation

Description

- The project goal is to make the entire state administration climate-neutral by 2030. This is to be achieved through energy efficiency plans, building renovation programmes and energy management systems, among other things
- Above all, the nationwide procurement of green electricity can reduce CO2 emissions by 160,000 t per year

Eligible Green Expenditures

2023: EUR 1.06 million

• 2024: EUR 1.16 million

Expected impact

CO2 savings in tons per year:

2023: 160,0002024: 150,000

Reference to the budget (2023/2024)

Section 6 Chapter 1

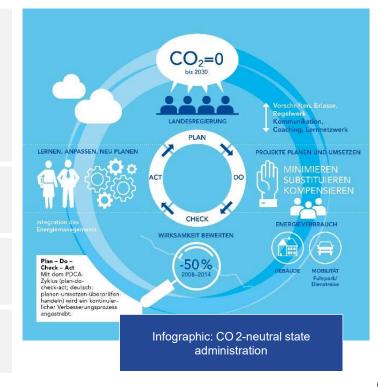


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More information can be found on the Internet at https://www.hessen.de/, regarding the green bond under https://finanzen.hessen.de/ or in Bloomberg under HESSEN or RESP LAEN.

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