Vonovia SE - Climate Change 2023

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Vonovia SE is Europe's leading private residential real estate company. Vonovia currently owns around 550,000 residential units in all attractive cities and regions in Germany, Sweden and Austria. It further manages around 72,800 apartments. Its portfolio is worth approximately €90 billion as of December 31st,2022. This is inclusive of Deutsche Wohnen SE, which was acquired on September 30, 2021.

For the first time in 2022, the Environmental Data provided covers the activities and services of the entire group Vonovia SE, inclusive of Deutsche Wohnen SE. As a part of the Deutsche Wohnen integration process, which started in 2022 and has been formally finalized as of January 1st 2023, all concepts, due diligence processes and performance indicators were compared and integrated.

As a modern service company, Vonovia focuses on customer orientation and tenant satisfaction. Offering them an affordable, attractive, and liveable home is the prerequisite for successful corporate development. This is why Vonovia invests in the maintenance, energetic modernization, and senior-friendly conversion of buildings. In addition, development and construction of new apartments, both for its own portfolio and for sale to third parties are part of the business model. Around 3.750 new apartments could thus be completed in 2022. Other residential services complement the business model.

A large number of business processes are integrated: The company's own craftsmen and caretaker's organization, Vonovia Technical Service (VTS), with more than 5,000 employees handles the necessary renovation work, a gardener's and caretaker's organization with over 800 employees takes care of the maintenance and development of the green spaces around the buildings, and a separate janitor organization provides comprehensive facility management. Vonovia employs a total of 12,063 people.

The company's carbon footprint includes emissions of around 1,16 million tons of CO2. Approximately 97 % of the emissions are caused by the operation of the rented residential building portfolio. The challenge is to ensure that the buildings erected from the 1950s to 1970s in particular, which account for the largest share of Vonovia's portfolio, are well refurbished in terms of energy efficiency. Improving the energy performance of Vonovia's housing stock - e.g., through energetic refurbishment of the building envelope or replacement of the fossil fuel-powered heating systems with more efficient technologies of heat and energy production – therefore is a major lever for reducing GHG emissions. Thus, another lever comprises the expansion of renewable energies as well as innovations in CO2-neutral heating systems.

We are aware of our responsibility and have set ourselves the clear goal of achieving a virtually climate-neutral building stock by 2045. This goal is just as much in line with the Paris climate goals as it is with the German Climate Action Plan. You can read about as to how we intend to achieve this goal in our sustainability report.

The Bochum-based company has been listed on the stock exchange since 2013 and has been included in the DAX 40 since September 2015. Vonovia SE is also listed in the international indices STOXX Europe 600, MSCI Germany, GPR 250 and EPRA/NAREIT Europe.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date
January 1 2022

End date
December 31 2022

Indicate if you are providing emissions data for past reporting years
Yes

Select the number of past reporting years you will be providing Scope 1 emissions data for
1 year

Select the number of past reporting years you will be providing Scope 2 emissions data for
1 year

Select the number of past reporting years you will be providing Scope 3 emissions data for
1 year

C0.3

(C0.3) Select the countries/areas in which you operate.
Austria
Germany
Sweden

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.
EUR

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.
Operational control

C-CN0.7/C-RE0.7

(C-CN0.7/C-RE0.7) Which real estate and/or construction activities does your organization engage in?
New construction or major renovation of buildings
Buildings management

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	DE000A1ML7J1

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?
Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Chief Executive Officer (CEO)	At the highest level, the Chief Executive Officer of Vonovia SE is responsible for the issue of sustainability and climate change incl. all underlying material topics (including environmental protection, both in our portfolio and business operations). He is supported by the Sustainability Committee, which comprises the entire Management Board of Vonovia and selected corporate functions (Sustainability & Strategy, Controlling, Accounting, Investor Relations, Communications). Vonovia's CEO deals with climate-related issues as required, for example when setting targets, such as the reduction of the CO2 intensity of the building stock or maintaining a refurbishment rate in Germany of 2.5 - 3% on average, investment decisions for major modernization projects, requirements for energy standards of new buildings, or the development of new business fields, such as tenant electricity, the construction of PV systems or the supply of green electricity through its own electricity sales company (VESG). [Example] One example for a climate-related decision by the CEO and the Management Board in 2022 was that the carbon emission target was confirmed after the merger with Deutsche Wohnen. At the same time, the specific targets for CO2 intensity for the years 2023 until 2028 have been set. Another example of climate-related decision by the CEO and the Management Board in 2022 was the decision to scale up the Photovoltaic program and increase the target for the installed output to 280 MWp by 2030.
Chief Operating Officer (COO)	The Chief Rental Officer (CRO, our COO), bears responsibility for the Corporate Portfolio Management function, which coordinates the energy-efficiency modernization activities. The properties/neighborhoods to be modernized are selected in strategic manner, informed by an underlying decarbonization tool, and in cooperation with the regions, and the optimal degree of modernization for each building is defined. The investments for the modernization programs are approved by the Management Board as a whole. [Example] One example for a climate-related decision by the COO and the Management Board in 2022 was that the carbon emission target was confirmed after the merger with Deutsche Wohnen. At the same time, the specific targets for CO2 intensity for the years 2023 until 2028 have been set. Another example of climate-related decision by the COO and the Management Board in 2022 was the decision to scale up the Photovoltaic program and increase the target to 280 MWp of installed output by 2030.
Other, please specify (Chief Development Officer (CDO))	The Chief Development Officer (CDO) is responsible for the development business in Austria, development in Germany and the operating business in Austria. This also includes sustainability aspects of new construction and development projects. [Example] One example of a strategic decision in 2022 was the investment of Vonovia in GROPYUS, a prop-tech company for digitization and transformation of real estate. Building on the strategic cooperation between the companies, Vonovia is strengthening its commitment to sustainable and affordable housing and is participating in the Series B financing round of GROPYUS as a lead investor. In addition, we joined the klimaaktiv Pakt under our CDO. The Vonovia subsidiary BUWOG is one of only eleven Austrian major companies – and the only one in the real estate sector – to be accepted into the Austrian Federal Ministry for Climate Action's new "klimaaktiv" pact, and, with its voluntary commitment, even exceeds the target of reducing carbon emissions by half by 2030. This consolidates BUWOG's leading position in the area of climate change mitigation.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Reviewing innovation/R&D priorities Reviewing and guiding strategy Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Overseeing and guiding scenario analysis Overseeing the setting of corporate targets Monitoring progress towards corporate targets Overseeing and guiding public policy engagement Overseeing value chain engagement Reviewing and guiding the risk management process Other, please specify (Reviewing and guiding major plans of action, Reviewing and guiding business plans, Setting performance objectives, Monitoring implementation and performance of objectives)	<Not Applicable>	Vonovia's Management Board deals with climate-related issues in all its meetings, because in all major decision fields, climate-related aspects play a vital role. For example, the Management Board approves all new construction and modernization projects, all of which have a decisive impact on the Group's carbon reduction target. For each project, the alignment with the target is explicitly stated in the project description. Also, the monitoring and forecast for the non-financial KPIs like the CO2-intensity and the average primary energy demand of new construction is on the agenda of the Management Board on a regular basis. The Management Board also decides upon the investment plan for energetic modernization and exchange of heating systems as well as new business fields such as tenant electricity, the construction of PV systems or the supply of green electricity through its own electricity sales company. In addition, the Management Board exercises its oversight of climate-related issues via the Sustainability Committee described in C1.1a, which meets at least three times a year to discuss current and future opportunities and challenges and decides upon specific targets and actions.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	The criteria used to assess competencies of our Board is the level of experience in the field of sustainability. Our CEO has been appointed at Vonovia in 2013, and since then, has been responsible for the issue of sustainability and the underlying material topics (including environmental protection and climate-related topics). At the same time, he is vice president of the German central real estate committee Zentraler Immobilien Ausschuss (ZIA) and the German Association for Housing, Urban and Spatial Development, both associations that emphasise sustainability in the real estate sector.	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee
Chief Executive Officer (CEO)

Climate-related responsibilities of this position
Developing a climate transition plan
Integrating climate-related issues into the strategy
Monitoring progress against climate-related corporate targets
Managing value chain engagement on climate-related issues
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line
More frequently than quarterly

Please explain
While Vonovia has a dedicated department of sustainability and strategy, which oversees the overall topic of climate-related issues, there are numerous responsibilities within the organisation based on the specific tasks and expertise within each department (e.g. portfolio management for energy efficient refurbishment, financial controlling for climate risk assessment & EU Taxonomy, residential environment for biodiversity, HR for workforce issues and so forth). The departments are each responsible for the assessment and monitoring of their specific opportunities and risks, including climate-related opportunities and risks. The respective department heads, who report directly to the Management Board, are primarily responsible for this. This allows for a direct line to share climate-related information with the Management Board. At the highest level, the Chief Executive Officer of Vonovia SE is responsible for the issue of sustainability at Vonovia in order to monitor and assess the current performance and projects concerning the (social and) environmental responsibility. The CEO also approves major investments / budget allocations with regard to programmes / initiatives with sustainability focus.

Position or committee
Other, please specify (Chief Rental Officer/ Chief Operating Officer)

Climate-related responsibilities of this position
Implementing a climate transition plan

Coverage of responsibilities
<Not Applicable>

Reporting line
Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line
More frequently than quarterly

Please explain
While Vonovia has a dedicated department of sustainability and strategy, which oversees the overall topic of climate-related issues, there are numerous responsibilities within the organisation based on the specific tasks and expertise within each department. The departments are each responsible for the assessment and monitoring of their specific opportunities and risks, including climate-related opportunities and risks. The respective department heads, who report directly to the Management Board, are primarily responsible for this. This allows for a direct line to share climate-related information with the Management Board. At the highest level, our Chief Rental Officer (CRO, our COO) is responsible for the investment and planning processes of the energy-efficiency modernization activities. The investments for the modernization programs are approved by the Management Board as a whole.

Position or committee
Other, please specify (Chief Development Officer)

Climate-related responsibilities of this position
Implementing a climate transition plan

Coverage of responsibilities
<Not Applicable>

Reporting line
Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line
More frequently than quarterly

Please explain
While Vonovia has a dedicated department of sustainability and strategy, which oversees the overall topic of climate-related issues, there are numerous responsibilities within the organisation based on the specific tasks and expertise within each department. The departments are each responsible for the assessment and monitoring of their specific opportunities and risks, including climate-related opportunities and risks. The respective department heads, who report directly to the Management Board, are primarily responsible for this. This allows for a direct line to share climate-related information with the Management Board. At the highest level, our CDO (Chief Development Officer) is responsible for sustainability aspects of new construction and development projects.

Position or committee
Sustainability committee

Climate-related responsibilities of this position
Developing a climate transition plan
Implementing a climate transition plan
Integrating climate-related issues into the strategy

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line
Quarterly

Please explain
A sustainability committee meets three to four times a year – as required – to discuss the overall strategic direction and to evaluate the company's sustainability performance. The committee comprises the Management Board, the chief representatives, the heads of Sustainability, Investor Relations, Corporate Communications, Controlling and Accounting. This setup allows us to ensure the systematic implementation of our sustainability strategy in all business areas right down to our local neighborhoods. The Head of Sustainability/Strategy regularly exchanges views with the CEO and the sustainability committee on current developments and issues. These include further developing the sustainability strategy and road map, defining and monitoring sustainability objectives and implementing sustainability projects.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	To make our progress in sustainability measurable, we have installed a key non-financial performance indicator within our management system which is equal to our financial indicators. Our Sustainability Performance Index, or SPI, measures specific targets we have set for sustainability. The SPI comprises a total of six core indicators - two of them with an ecological focus: - The CO2 intensity (in kg CO2e/m²) of our Scope 1 and Scope 2 emissions across our portfolio, and a portion of our Scope 3 emissions. - Reduction in average primary energy demand per m² for newly constructed buildings. Since 2021, the SPI is directly linked to Executive Board and top management remuneration one level below the executive board (long term incentive plan, LTIP). The remuneration system was approved by the Annual Meeting in 2021, the specific targets are set by the Supervisory Board for each new LTIP period. The Supervisory Board also decides upon any changes in the methodology.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive
Chief Executive Officer (CEO)

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary

Performance indicator(s)
Reduction in emissions intensity
Energy efficiency improvement
Reduction in total energy consumption

Incentive plan(s) this incentive is linked to
Long-Term Incentive Plan

Further details of incentive(s)
To make our progress in sustainability measurable, we have installed a key non-financial performance indicator within our management system which is equal to our financial indicators. Our Sustainability Performance Index, or SPI, measures specific targets we have set for sustainability. The SPI comprises a total of six core indicators - two of them with an ecological focus:
- The CO2 intensity (in kg CO2e/m²) of our Scope 1 and Scope 2 emissions across our portfolio, and a portion of our Scope 3 emissions.
- Reduction in average primary energy demand per m² for newly constructed buildings.

Since 2021, the SPI is directly linked to the remuneration system of the Executive Board and the top management below the executive board level (long term incentive plan,

LTIP), giving targets for a 4-year time horizon. The remuneration system was approved by the Annual Meeting in 2021, the specific targets are set by the Supervisory Board for each new LTIP period. The Supervisory Board also decides upon any changes in the methodology.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The SPI comprises various sustainability indicators, two with a direct impact on our climate-targets: CO2 intensity (kg CO2e/m²) of Scope 1 and 2 and a proportion of Scope 3 emissions, as well as reduction in average energy demand per m² in newly constructed buildings. Both KPIs thus pay towards achieving our climate target, e.g. achieving a virtually climate neutral building portfolio by 2045.

Entitled to incentive
Chief Financial Officer (CFO)

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary

Performance indicator(s)
Reduction in emissions intensity
Energy efficiency improvement
Reduction in total energy consumption

Incentive plan(s) this incentive is linked to
Long-Term Incentive Plan

Further details of incentive(s)
To make our progress in sustainability measurable, we have installed a key non-financial performance indicator within our management system which is equal to our financial indicators. Our Sustainability Performance Index, or SPI, measures specific targets we have set for sustainability. The SPI comprises a total of six core indicators - two of them with an ecological focus:
- The CO2 intensity (in kg CO2e/m²) of our Scope 1 and Scope 2 emissions across our portfolio, and a portion of our Scope 3 emissions.
- Reduction in average primary energy demand per m² for newly constructed buildings.

Since 2021, the SPI is directly linked to the remuneration system of the Executive Board and the top management below the executive board level (long term incentive plan, LTIP), giving targets for a 4-year time horizon. The remuneration system was approved by the Annual Meeting in 2021, the specific targets are set by the Supervisory Board for each new LTIP period. The Supervisory Board also decides upon any changes in the methodology.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The SPI comprises various sustainability indicators, two with a direct impact on our climate-targets: CO2 intensity (kg CO2e/m²) of Scope 1 and 2 and a proportion of Scope 3 emissions, as well as reduction in average energy demand per m² in newly constructed buildings. Both KPIs thus pay towards achieving our climate target, e.g. achieving a virtually climate neutral building portfolio by 2045.

Entitled to incentive
Chief Operating Officer (COO)

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary

Performance indicator(s)
Reduction in emissions intensity
Energy efficiency improvement
Reduction in total energy consumption

Incentive plan(s) this incentive is linked to
Long-Term Incentive Plan

Further details of incentive(s)
To make our progress in sustainability measurable, we have installed a key non-financial performance indicator within our management system which is equal to our financial indicators. Our Sustainability Performance Index, or SPI, measures specific targets we have set for sustainability. The SPI comprises a total of six core indicators - two of them with an ecological focus:
- The CO2 intensity (in kg CO2e/m²) of our Scope 1 and Scope 2 emissions across our portfolio, and a portion of our Scope 3 emissions.
- Reduction in average primary energy demand per m² for newly constructed buildings.

Since 2021, the SPI is directly linked to the remuneration system of the Executive Board and the top management below the executive board level (long term incentive plan, LTIP), giving targets for a 4-year time horizon. The remuneration system was approved by the Annual Meeting in 2021, the specific targets are set by the Supervisory Board for each new LTIP period. The Supervisory Board also decides upon any changes in the methodology.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The SPI comprises various sustainability indicators, two with a direct impact on our climate-targets: CO2 intensity (kg CO2e/m²) of Scope 1 and 2 and a proportion of Scope 3 emissions, as well as reduction in average energy demand per m² in newly constructed buildings. Both KPIs thus pay towards achieving our climate target, e.g. achieving a virtually climate neutral building portfolio by 2045.

Entitled to incentive
Other C-Suite Officer

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary

Performance indicator(s)
Reduction in emissions intensity
Energy efficiency improvement

Reduction in total energy consumption

Incentive plan(s) this incentive is linked to
Long-Term Incentive Plan

Further details of incentive(s)
To make our progress in sustainability measurable, we have installed a key non-financial performance indicator within our management system which is equal to our financial indicators. Our Sustainability Performance Index, or SPI, measures specific targets we have set for sustainability. The SPI comprises a total of six core indicators - two of them with an ecological focus:
- The CO2 intensity (in kg CO2e/m²) of our Scope 1 and Scope 2 emissions across our portfolio, and a portion of our Scope 3 emissions.
- Reduction in average primary energy demand per m² for newly constructed buildings.

Since 2021, the SPI is directly linked to the remuneration system of the Executive Board and the top management below the executive board level (long term incentive plan, LTIP), giving targets for a 4-year time horizon. The remuneration system was approved by the Annual Meeting in 2021, the specific targets are set by the Supervisory Board for each new LTIP period. The Supervisory Board also decides upon any changes in the methodology.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The SPI comprises various sustainability indicators, two with a direct impact on our climate-targets: CO2 intensity (kg CO2e/m²) of Scope 1 and 2 and a proportion of Scope 3 emissions, as well as reduction in average energy demand per m² in newly constructed buildings. Both KPIs thus pay towards achieving our climate target, e.g. achieving a virtually climate neutral building portfolio by 2045.

Entitled to incentive
Management group

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary

Performance indicator(s)
Reduction in emissions intensity
Energy efficiency improvement
Reduction in total energy consumption

Incentive plan(s) this incentive is linked to
Long-Term Incentive Plan

Further details of incentive(s)
To make our progress in sustainability measurable, we have installed a key non-financial performance indicator within our management system which is equal to our financial indicators. Our Sustainability Performance Index, or SPI, measures specific targets we have set for sustainability. The SPI comprises a total of six core indicators - two of them with an ecological focus:
- The CO2 intensity (in kg CO2e/m²) of our Scope 1 and Scope 2 emissions across our portfolio, and a portion of our Scope 3 emissions.
- Reduction in average primary energy demand per m² for newly constructed buildings.

Since 2021, the SPI is directly linked to the remuneration system of the Executive Board and the top management below the executive board level (long term incentive plan, LTIP), giving targets for a 4-year time horizon. The remuneration system was approved by the Annual Meeting in 2021, the specific targets are set by the Supervisory Board for each new LTIP period. The Supervisory Board also decides upon any changes in the methodology.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The SPI comprises various sustainability indicators, two with a direct impact on our climate-targets: CO2 intensity (kg CO2e/m²) of Scope 1 and 2 and a proportion of Scope 3 emissions, as well as reduction in average energy demand per m² in newly constructed buildings. Both KPIs thus pay towards achieving our climate target, e.g. achieving a virtually climate neutral building portfolio by 2045.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?
Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	The forecast for the current year is managed via controlling and risk management. The budget will be concrete for the following year and a medium-term plan for the next 5 years will be drawn up in parallel.
Medium-term	1	5	A medium-term budget plan is drawn up for the next 5 years. The risk categories in the risk report of our Annual Report relate to this five-year window.
Long-term	5	50	All long-term plans relate to a period of more than 5 years and have no specific end date. However, we often use the time horizon until 2030 as well as until 2045 as relevant milestones.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Our risk management process is divided into five different categories to assess the potential amount of financial losses. We distinguish between the impact on the income statement on the one hand and the impact on the balance sheet on the other. Both impacts are understood in line with the medium-term planning horizon as a potential financial loss over five years.

Based on the COSO Framework (COSO = Committee of Sponsoring Organizations), a risk universe with the following four main risk categories has been defined to facilitate risk identification: 1. strategy, 2. regulatory environment & overall statutory framework, 3. operating business and 4. financing (including accounting and tax). A structured risk catalogue has been assigned to each of these categories.

When it comes to assessing risk, a distinction is made between risks with an impact on profit and loss and those affecting the balance sheet. Risks with an impact on profit and loss have a negative effect on the company's sustained earnings power and, as a result, on Group FFO Funds from Operations, key financial figure in Real Estate companies). In general, these risks also have an impact on liquidity. Risks affecting the balance sheet do not impact Group FFO. In particular, these risks can be such that they do not affect liquidity, e.g., because they only impact property values.

Risk assessments are always performed in quantitative terms, if possible. If this is difficult to achieve or not possible, a qualitative assessment is performed using a detailed matrix comprising five loss categories. The expected amount of loss is classified to one of five categories:

- Very high (5): Threatens the company's existence; Possible loss of > € 750 million in Group FFO; Possible balance sheet loss of > € 12,000 million
- High (4): Dangerous impact on business development, previous business situation cannot be restored in the medium term; Possible loss of € 375 million to € 750 million in Group FFO; Possible balance sheet loss of € 6,000 million to € 12,000 million
- Considerable (3): Temporarily impairs business development; Possible loss of € 150 million to € 375 million in Group FFO; Possible balance sheet loss of € 2,400 million to € 6,000 million
- Noticeable (2): Low impact, possibly leaving a mark on business development in one or more years; Possible loss of € 40 million to € 150 million in Group FFO; Possible balance sheet loss of € 600 million to € 2,400 million
- Low (1): Minor impact on business development; Possible loss of € 5 million to € 40 million in Group FFO; Possible balance sheet loss of € 80 million to € 600 million

Losses of category (3) and higher are defined as "significant" damage and thus as SUBSTANTIAL FINANCIAL IMPACT for our business. This corresponds to a financial impact on profit and loss of more than €150 million in Group FFO or an accumulated loss of more than €2,400 million related to the balance sheet.

For the expected probability of occurrence five clusters have been defined:

- Very likely (5): It is to be assumed that the risk will materialize during the observation period. 95% probability
- Likely (4): The risk is likely to materialize during the observation period. 60–95% probability
- Possible (3): The risk could materialize during the observation period. 40–59% probability
- Unlikely (2): The risk is unlikely to materialize during the observation period. 5–39% probability
- Very unlikely (1): It is to be assumed that the risk will not materialize during the observation period. < 5% probability

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Risks: Vonovia has implemented a comprehensive risk management system that ensures that all risks relevant to the company are being identified, assessed and managed. Risk evaluation is updated biannually. Thus, climate-related risk management is fully integrated into multi-disciplinary company-wide risk management process. This reduces potential risks, secures the company's continued existence, supports its strategic development and promotes responsible entrepreneurial action. Overall, Vonovia's risk management system is based on an integrated five-pillar risk management approach with a focus on medium- and long-term risks.

The content of the existing risk management system is aligned with the corporate strategy, including relevant sustainability aspects. In the case of ESG risks, the effects of the risks on Vonovia (outside-in view) are integrated, as well as the effects on the environment and society (inside-out view). With the help of a materiality analysis, potential ESG (environmental, social, governance) risks are examined and assessed for materiality. Consequently, risk assessment not only covers our direct operations, but also impacts on upstream and downstream supply chain.

Operational management of the risk management system falls within the remit of the Head of Controlling, who is responsible for the Risk Controlling department. He reports to the Chief Financial Officer (CFO). The Risk Controlling department initiates the software-supported, periodic risk management process and consolidates and validates the reported risks. It is also responsible for validating the risk management measures and monitoring their implementation. Together with the individual risk owners, the Risk Controlling department defines early warning indicators that are used to monitor actual developments about specific risks.

The risk owners are the managers at the level directly below the Management Board. They are responsible for identifying, assessing, managing, monitoring, documenting and communicating all risks in their area of responsibility. They are also responsible for risk reporting to Risk Controlling based on defined reporting cycles (generally semi-annual or ad hoc, as required). The risk owner determines suitable mitigation measures to reduce the damage potential of the risks in his area of responsibility (reducing the probability of occurrence and/or the amount of damage), taking into account economic efficiency. The appropriate risk strategy must be determined for the measure (avoid, reduce, pass on, diversify, bear risk itself). The measures must be documented in a sufficiently concrete manner and include the following contents: Description, milestones, costs and current status.

For climate risks, different departments are the risk owners - depending on the specific risk. For the transitory risk of CO2 pricing, for example, this is the Sustainability & Strategy department. As risk owner, it quantifies and evaluates the risk potential of CO2 pricing in coordination with the Portfolio Management department. This is entered into the risk tool. The values determined are incorporated into investment planning. This is implemented in a similar way for physical climate risks, for example. Here, Environmental Controlling is the risk owner.

Based on a half-yearly risk inventory taken in the first and third quarters of a fiscal year Risk Controlling prepares a risk report for the Management Board and the Supervisory Board. It also simulates major risk developments and their impact on the corporate plans and objectives. The reporting system ensures that both executives and the supervisory bodies are fully informed and provides relevant operational early warning indicators. The risk management system is regularly updated and further developed and adapted to changes in the company. The effectiveness of the risk management system is audited annually by an external auditor.

For the analysis of long-term physical climate risks, the risk management described here is flanked by a digital climate risk tool based on the RCP scenarios. This is used by portfolio management and development for individual investment planning and as an early warning system.

Opportunities: In the process of defining its strategy and preparing its short and medium-term plans, Vonovia identifies earnings potential that has been reflected appropriately in these plans, taking the corresponding assumptions and scenarios into account. The assumptions regarding the company’s sustainability strategy, sociological and political megatrends, the regulatory environment, the financing environment and the company’s operating business are not only associated with the risks described above. Vonovia’s business development can also end up being more favourable than in the assumptions included in the company’s plans. These opportunities can arise from a scenario in which strategy-related opportunities, economic environment and market-related factors, and the company’s operating business show more positive development than that underlying the corporate plans.

Vonovia’s new sustainability strategy could create further opportunities extending beyond the corporate targets already defined in the 2022 budget. Vonovia’s long-term climate journey requires new concepts for measures and financing to underpin its ecological, technological and economic objectives. In addition, the strategy, which is based on our newly defined neighborhoods, offers a whole variety of opportunities with regard to those modernization measures that relate directly to the existing portfolio and measures relating to new construction, but also measures relating to the residential environment.

As a central driver of innovation at Vonovia, the Innovation & Business Building (I&BB) department focuses on global megatrends and especially on renewble energy initiatives for the buildings that also have a significant impact on the housing industry and keeps an eye on the different needs of customers. Through cooperation with other departments, startups, research institutions, and partner companies, new ideas and business areas are thus developed and launched in an iterative and targeted manner.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Regulatory risks are fully integrated into our risk management: The responsibility lies with the risk owners in the company in accordance with the semi-annual risk process and reassessed on a regular basis. The resulting risk report is reviewed and also assessed by the Management Board and Supervisory Board. Substantial risks (in our case "red" and "yellow" risks) are included in the annual report (risk section). Vonovia closely follows planned amendments to laws directly and through collaboration with industry associations through our Public Affairs department, as our business activities are above all subject to tenancy and construction law, as well as tax and environmental law. Any adverse changes in the legal environment, such as regulations on rental amounts and developments, regulation on modernization measures and restrictions on modernization options or regulations (including taxes), may result in costs being incurred in the event of a property sale. This could have an adverse effect on Vonovia's business activities. [Example] One example of a regulation impacting our business is the German Building Energy Act (Gebäudeenergiegesetz, GEG). It defines mandatory standards for energy performance of buildings and structural and heating system standards and thus has a potentially high impact on costs for modernization and new construction. This segment of our business model is fundamentally characterized by high initial investments and long lifetime. Changes in the legal framework conditions therefore have the potential to have long-term effects on the economic operation of the buildings as well as on the CO2 reduction path of our building stock.
Emerging regulation	Relevant, always included	Regulatory risks are fully integrated into our risk management: The responsibility lies with the risk owners in the company in accordance with the semi-annual risk process and reassessed on a regular basis. The resulting risk report is reviewed and also assessed by the Management Board and Supervisory Board. Substantial risks (in our case "red" and "yellow" risks) are included in the annual report (risk section). Vonovia closely monitors planned changes in legislation. The responsibility lies in our Public Affairs department, as our business activities are primarily subject to tenancy and construction as well as tax and environmental law. Adverse changes to the legal framework, such as regulations on rent levels and development, regulations on modernization measures as well as restrictions on modernization options or regulations (also of a tax nature) that lead to costs in the event of a property sale, may have a negative impact on Vonovia's business activities. [Example] A current example of this is the carbon pricing for fossil fuels used for heating, such as natural gas, oil and coal (Fuel Emissions Trading Act BEHG). Until 2022, the law states that tenants have to bear all costs, but the German Government decided that the carbon price will be split between owners and tenants from 2023 onwards. Depending on CO2 intensity of a building, owners have to bear up to 95% of carbon tax. As 85% of our portfolio is located in Germany, the carbon price will have large direct impact on our business in the future. The law has already been passed but is only driving into force in 2023.
Technology	Relevant, always included	To achieve a virtually climate-neutral building stock, Vonovia has developed a climate path that envisages the need for technological leaps in its third stage. It will not be possible to achieve a climate-neutral building stock solely by improving energy efficiency through energy-efficient renovations and the expansion of renewable energies. This requires innovative ideas and methods. [Example] In the future, electricity will play an increasingly important role in supplying buildings and their surroundings (e.g. for electromobility). There is a risk that the amount of green energy available will not be sufficient. Therefore, intelligent storage and decentralized generation concepts are needed. For example, Vonovia is researching the use of an electrolyser for conversion into hydrogen as a storage medium. There is a risk that these technologies will not reach the necessary market maturity.
Legal	Relevant, always included	Failure to comply with our legal obligations in relation to climate change is a key risk to our business. [Example] For example, not meeting the requirements of the Green Building Act or other regulations and legal requirements could lead to claims for damages or climate-related litigations, that would directly affect our reputation as well as financial costs. This could further include non-compliance with environmental regulations or recycling quotas, as well as climate- or environmental regulations.
Market	Relevant, always included	Market risks summarize changes in consumer preferences and behavior, [Example] moving even faster towards energy-efficient and sustainable housing than already expected. This might increase the need for energy-efficient modernization and new builds drastically in the future, thus increasing expenditures for Vonovia.
Reputation	Relevant, always included	Vonovia's reputation is crucial for building business relationships. A poor reputation can make it more difficult to let our residential units or lead to the termination of rental agreements. [Example] On the capital market, however, reputation as a company that acts in an ecologically responsible manner plays an important role. Failure to implement climate protection measures as committed or ignoring international and national climate protection targets can lead to a significant loss of reputation and critical inquiries from shareholders - and even to disinvestment.
Acute physical	Relevant, sometimes included	Physical climate risks are part of our overarching climate scenario analysis assessing the impact of various hazards — for example heat stress and temperature increase, drought, heavy precipitation, flooding and storms — in different time horizons until 2030, 2045 and 2085. [Example] Currently, the real estate sector in Germany, Austria and Sweden is affected by acute physical risks to a limited extent until a forseen future (2045). Furthermore, these risks are covered by insurance and therefore do not represent a direct financial risk. In our building stock, only a neglectable amount of assets is located in areas currently exposed to particular risks from the effects of climate change. Therefore, in our view, on Group level there are no significant direct risks at present that could arise from extreme weather conditions due to climate change, such as heavy rain and flooding. However, various studies assume, that there will be increasingly intense extreme weather events in the future and, as a result, an increase in the amount of damage. This is why we include acute risks in our selected risk assessment in order to regularly update the risk assessment and materiality.
Chronic physical	Relevant, sometimes included	Physical climate risks are part of our overarching climate scenario analysis assessing the impact of various hazards — for example heat stress and temperature increase, drought, heavy precipitation, flooding and storms — in different time horizons until 2030, 2045 and 2085. [Example] As with acute physical risks, the real estate sector in Germany, Austria and Sweden is only affected by chronic physical risks to a very limited extent at the present time. However, the rise in average temperature is expected to become a risk in the future. Tangible consequences for German cities could include changes in the indoor climate and vegetation that pose risks to people and nature. Therefore, there could be a need for investment in cooling systems, in measures to improve air quality, in additional watering, and in the use of climate-resistant vegetation.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
[Situation] Current legislation in Germany includes a carbon price for fossil fuels used for heating, such as natural gas, oil and coal as well as for district heating (Fuel Emissions Trading Act BEHG). [Timeline] The carbon price for these emissions applied for the first time in 2021 and increases in defined steps from €25 per metric ton of CO2 in 2021 to €55 per metric ton CO2 in 2025. In 2022, CO2 prices in Germany stood at €30 per metric ton of CO2. In 2026, there is a trading range in which the price can vary between €55 and €65 per metric ton of CO2. In 2027 and beyond, the carbon price will be determined in a free trading system. [Task] Until 2022, the law states that tenants have to bear the full carbon price. However, from 2023 onwards, the carbon price will be split between owners and tenants. Depending on CO2 intensity of a building, owners have to bear up to 95% of carbon tax, while in highly efficient buildings, the owner does not have to bear any cost. With this change, the government increased the incentive for owners to modernize their buildings and take energy efficiency into consideration when building or updating living space. As 85% of our portfolio is located in Germany, the carbon price has a large direct impact on our business, making modernization efforts financially relevant [Action] We have already set the target of achieving a virtually climate-neutral building portfolio by 2045, with carbon intensity of less than 5 kg of CO_2 equivalents per m^2 of rental area. The energy-efficient modernization measures focus on heat insulation for facades, basement ceilings and attics, the replacement of windows and the installation of new heating boilers based on renewable energy sources. [Result] With our comprehensive modernization program, we are continuously reducing the CO2 intensity of our buildings significantly and thus reduce the financial burden we have to bear in relation to the carbon price. Since 2020, we have reduced the CO2-intensity of our German building stock by 16,5 %.

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
40000000

Potential financial impact figure – maximum (currency)
150000000

Explanation of financial impact figure
In our risk management, the risk falls into the potential loss range (2) of €40-150 million for the 5-year period (based on Group FFO). As a basis for calculation, we used actual energy consumption and scope 1 emission data from our portfolio in 2021, which already included Deutsche Wohnen portfolio. If no actual energy consumption was available, we used energy performance data. This data was then extrapolated until 2026, using assumptions for modernization, sales, new construction and vacancies. The resulting CO2 emissions were then multiplied by the expected CO2 price. We assume a continuous increase in the CO2 levy for our Scope 1 emissions from 25€/tCO2 in 2021 until 65€/tCO2 in 2026 and up to €100/tCO2 in 2027 and a burden sharing between tenants and owners according to the CO2e/m^2 rental space (starting from 2023). This resulted in a potential cost for the period 2022 to 2027 in the range of €40-150 million.

Cost of response to risk
1539000000

Description of response and explanation of cost calculation
Our response to this risk is to increase energy efficiency through energy refurbishment of our buildings to limit energy consumption and emissions.

In the light of the new Federal Climate Change Act and the sector targets contained therein, we have set the target of achieving a virtually climate-neutral building portfolio by 2045, with carbon intensity of less than 5 kg of CO_2 equivalents per m^2 of rental area. Vonovia is committed to making its property portfolio virtually climate neutral by 2045. The energy-efficient modernization measures focus on heat insulation for facades, basement ceilings and attics, the replacement of windows and the installation of new heating boilers. We prioritize the buildings with currently high CO2 emissions and poor energetic performance in the planning in order to have the greatest possible leverage for a rapid reduction of CO2 emissions in our portfolio. In 2022, we modernized around 6,800 units (not including heating system upgrades) and achieved a refurbishment rate of around 1.9% in our German portfolio (excluding Deutsche Wohnen). Additionally, we replaced heating systems in around 2,100 units in the reporting year. The total costs for these modernization measures in 2022 were around €252 million, after higher investments the years before. Thus, the basis for calculation has been an average of our 2019 – 2023 expenditures for the energetic modernization program. Assuming a 2.5% cost increase until 2026, it will result in a total cost of €1,539, or €385 million per year.

As a result, these modernization measures reduce the follow-up costs from CO2 pricing.

Comment
The investment sum described here should not be seen as an exclusive contribution to averting the risk described, but as a measure with a broader impact (positive rental revenues, CO2 savings, increase in housing and building value, etc.).

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Other, please specify (Increased severity and frequency of extreme weather events such as cyclones and floods)

Primary potential financial impact
Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description

[Situation] Extreme weather events pose an increased risk to nature, buildings, infrastructure and human health. These events are expected to increase significantly in frequency and intensity due to climate change. The IPCC's Sixth Assessment Report states that some acute climate-related weather events, such as cyclones and floods, are already irreversible under current climatic conditions. This is also an issue in Germany: The geoinformation maps by the German Federal Institute for Urban, Building and Spatial Research (see: https://www.gisimmorisknaturgefahren.de/immorisk.html) show condensed data, indicating that the frequency and intensity of extreme weather events will increase. [Task] To assess the impact and risk for the entire building stock, a systematic assessment of magnitude and regional occurrence had to be developed. By conducting a profound physical hazard scenario analysis, the increasing impacts from extreme weather events on our building portfolio have been confirmed. Thus, the task is to prepare for possible extreme weather events, implement security and emergency systems and introduce reliable mitigation measures. [Action] Such measures are already being derived for new construction, neighborhood developments and, in particular, the residential environment. These include among others shadings on our buildings and green areas, increase the quality of windows, intelligent water management systems and the expansion of retention and water retention systems (e.g., also via roof greening).
[Result] As a result, we have derived a comprehensive risk assessment for all our buildings as well as an integrated process to address the relevant risk in new construction and modernization. The assessment also shows that, considering the already implemented measures in the last years and decades, the vulnerability of our assets (net risk) is significantly lower than the sensitivity of the assets to the climate hazard (gross risk). This assessment will be updated regularly to include the most recent climate scenarios as well as implemented mitigation measures.

Time horizon
Long-term

Likelihood
More likely than not

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
30000000

Potential financial impact figure – maximum (currency)
170000000

Explanation of financial impact figure
Currently, almost 90% of all building damage is covered by insurance, meaning all financial losses, costs for building repairs and other expenses will be covered by insurance and not increase costs for Vonovia. Our calculation does not take into consideration, whether our portfolio will remain insurable, as it involves many assumptions. For the period up to 2050, we therefore initially assume a linear potential loss distribution in a range of €30 – 170 million, while the possibility of insuring buildings against extreme weather damage continues to exist. This assumes a maximum loss of €6 million per year. Within our risk management, considering the time period of 5 years, the risk falls into the potential damage range of €5-40 million, resulting in a rather low financial damage in the medium-term time horizon.

Cost of response to risk
130000000

Description of response and explanation of cost calculation
Extreme weather events will increasingly threaten our buildings and thus increase insurance costs. To calculate the potential cost of responding to this risk, we assume that the possibility of insuring buildings against extreme weather damage continues to exist. Therefore, the sum is calculated from the linear extrapolation of all the building damage not covered by insurance, which is approx. €130 million until 2045. However, this value is overestimated, since damage not caused by extreme weather events is also included. The real response value is therefore probably significantly lower. The task is to implement concrete measures to adequately counter these risks, e.g. through flood defense systems. Such measures are already being derived for new construction, neighborhood developments and, in particular, the residential environment. These include an increased focus on intelligent water management systems and the expansion of retention and water retention systems (e.g., also via roof greening).

In the future, we will improve risk analysis for long-term acute physical damage. As a result, these measures will decrease the vulnerability of our buildings towards extreme weather events.

Comment
The risk described here is subject to a high degree of uncertainty about the probability of occurrence and the amount of damage. This shows that the acute physical climate risks in Middle and Northern Europe are still difficult to forecast.

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Mandates on and regulation of existing products and services

Primary potential financial impact
Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
[Situation] Climate-change related regulations in the real estate sector already exist in many forms and will continue to increase. Examples of existing regulations currently impacting our business are the German Building Energy Act, the Landlord to Tenant Electricity Act, or regulations coming from the EU taxonomy. [Task] Not meeting the accompanying requirements can lead to decreased revenues, if Vonovia buildings need rework or demand for our products and services decrease. Therefore, the task is to regularly update and modernize our building portfolio to meet regulatory demands and make our buildings more energy-efficient.

[Action] To achieve our goal of climate-neutral building stock, Vonovia developed scenarios and implemented a climate path for the company. Since 2017, Vonovia sets average annual refurbishment targets of 2.5 - 3% of the German portfolio. To refinance the costs of energy-efficient refurbishment, landlords currently can pass on 8% of

investment costs or a maximum of €2-3 per m² to the rent. In return, tenants save on energy costs thanks to the building's improved energy efficiency.

To prevent higher rents, policymakers may re-regulate or abolish the modernization levy. This would reduce or possibly eliminate the incentive for landlords to carry out energy-efficient refurbishments or increase the cost of these modernizations. [Result] We consider the likelihood of a complete abolition to be very low - but it could be that the amount of the modernization levy is reduced. This would limit the profitability of energy-efficient refurbishment measures. Another lever is the design of public support systems. These could compensate for a restriction of the modernization levy.

Time horizon
Long-term

Likelihood
Exceptionally unlikely

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
112000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
We calculate the financial impact figure assuming a decrease of the modernization levy while maintaining our modernization intensity of 1.9%. We assume that the modernization levy will not be at an average of €1.20 per m² (2022: €1.20; 2021: €1.24), but will fall to €0.8 per m². This would result in a reduction from the 8% currently permitted to around 5%. Further assumptions are a constant stock (487,659 apartments in Germany with a living space of 29,990,000 m²) and a constant allocation to the rent of an average of €0.8 per m² until 2030. Compared with the current apportionment of €1.20/m², this would result in lower rental income of around €112 million by 2030.

Cost of response to risk
3490000000

Description of response and explanation of cost calculation
Improving energy efficiency remains Vonovia's first lever on the path to a virtually climate-neutral building stock. In line with the company's climate path developed in 2020, refurbishment to improve energy efficiency remains a key building block. Our task is to continuously improve energy efficiency measures and to be able to carry them out more cost-efficiently and effectively.

Vonovia has invested around €300-350 million per year in energetic modernization over the past years. In 2022, we achieved a refurbishment rate of 1.9% in our German portfolio. Assuming an investment volume based on the average of our past year invest programs, this mounts up to around €3,5 billion accumulated by 2030. This sum would still be necessary to meet the climate path target, but as a result, the lower levy would extend the payback period for the measures.

Comment
The investment sum described here should not be seen as an exclusive contribution to averting the risk described, but as a measure with a broader impact (positive income, CO2 savings, increase in housing and building value, etc.).

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Move to more efficient buildings

Primary potential financial impact
Other, please specify (Increased revenues resulting from increased rents)

Company-specific description
[Situation] Energy-efficient retrofitting of the building stock is the biggest lever on the path to a carbon-neutral building stock. [Task] To create an opportunity in terms of cost savings and preparation for future developments (such as higher costs in the form of taxes relating to energy consumption or resource conservation, for example), Vonovia focuses on modernization and renovation projects. [Action] Last year, we achieved a renovation rate of 1.9% in our German portfolio. We modernize our buildings to reduce heating costs and limit CO2 emissions. Energy-efficient modernization measures focus on the thermal insulation of facades, basement ceilings and attics, the replacement of windows and the installation of new heating systems. This quota stands for contemporary living comfort, good building efficiency and more climate protection. In 2022, we were able to modernize around 6,800 homes in Germany (excl. heating system upgrades) and replaced heating systems in around 2,100 units in the reporting year. In this way, we were able to significantly reduce heating costs for our tenants and our operating costs and save around 9,300 tons of CO2.

[Timeline, Result] We continue to see energy-efficient refurbishment as the foundation of our climate strategy. Since 2017, Vonovia sets average annual refurbishment targets of 2.5 - 3% of the German portfolio - a clear indication that we take our responsibilities seriously, since the nationwide trend in Germany is a refurbishment rate of 1%. In 2022, we were not able to meet our ambitious target. The drop is, among other things, attributable to the new conditions for subsidies and the adjustments to the internal management system to focus on the neighborhood level, which requires more complex and therefore longer planning. In the year ahead, the refurbishment rate will be between 0.3% and 0.8% due to the challenging interest rate environment, increased construction costs and reduced subsidies. Since we already exceeded our CO2 reductions targets in previous years, this won't endanger our ability to stick to our climate path. In the future, we aim to return to our long-term refurbishment rate of above 2.5%.

Time horizon
Long-term

Likelihood
Virtually certain

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
369000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The opportunity is to increase the measures of energy-efficient building refurbishment. The assumption here is that the annual refurbishment rate of 2022 of 1.9% will be stable until 2030. Assuming a constant floor area and a constant modernization allocation to tenants of €1.20 per m², this would result in additional rental income of around €369 million by 2030 - or an annual average of around €45 million in additional income.

Cost to realize opportunity
3490000000

Strategy to realize opportunity and explanation of cost calculation
In the light of the new Federal Climate Change Act and the sector targets contained therein, we have set the target of achieving a virtually climate-neutral building portfolio by 2045, with carbon intensity of less than 5 kg of CO_2 equivalents per m² of rental area. Vonovia is committed to making its property portfolio virtually climate neutral by 2045. Energy-efficient refurbishment is the first and most important lever for achieving our goal of a climate-neutral building stock and uncover the opportunity of resource efficiency. Our task is to introduce energy-efficiency measures, such as serial building refurbishment based on the Energiesprong principle (an approach for efficient refurbishment of buildings). This way, it is possible to keep costs low and thus be able to achieve a high refurbishment rate while keeping rent increases for tenants as low as possible. The energy-efficient modernization measures focus on heat insulation for facades, basement ceilings and attics, the replacement of windows and the installation of new heating systems. We prioritize the buildings with high CO2 emissions and poor energetic performance in the planning in order to have the greatest possible leverage for a rapid reduction of CO2 emissions in our portfolio. In 2021, we modernized around 6,800 units (not including heating system upgrades and achieved a refurbishment rate of 1.9% in our German portfolio. Additionally, we replaced boilers in around 2,100 units in the reporting year.

In the calculation presented, we assume a refurbishment rate of 1.9 %, Vonovia has invested around €300-350 million per year in energetic modernization over the past years. Assuming a constant investment volume and a 2.5% price increase, this amounts to around €3.5 billion accumulated by 2030.

Comment
The investment sum described here should not be seen as an exclusive contribution to supporting the opportunity described, but as a measure with a broader impact (positive income, CO2 savings, increase in housing and building value, etc.).

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Shift in consumer preferences

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
[Situation] In addition to improved energy efficiency, the supply of renewable energies represents the second key lever on the path to a climate-neutral building stock. At the same time, our tenants are increasingly aware of climate-related topics and energy efficiency. [Task] Due to the liberal electricity market in Germany, Vonovia has no direct influence on the private electricity use of its tenants. However, Vonovia is addressing changing consumer preferences and, to this end, has set up its own energy company (VESG) for the sale of electricity (and heating) so that it can, for example, sell green electricity directly to tenants and thus contribute to the wider use of renewable energies: [Action] With each new lease, tenants receive an offer to purchase green electricity from the Vonovia subsidiary. Vonovia has also launched tenant electricity marketing projects. Tenants have the opportunity to purchase green electricity generated by PV systems on the roof of the property. [Result] As a result, 38,800 tenants purchased green electricity directly from VESG in 2022.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
51000000

Potential financial impact figure – maximum (currency)
205000000

Explanation of financial impact figure
The basis for assessing the potential impact is the 2022 sales volume: Here, during the whole year, approximately 39,000 customers purchased green electricity from Vonovia with a volume of around 49 GWh. The sales for this amounted to approx. €16 million.
Assuming that all Vonovia tenants (initially in Germany, as the offer is currently only available here) are also potential users of the offer, 488,000 customers would be potentially possible. In this example, we calculate 25% of customers in comparison to 100% of customers, i.e., potential sales between €51 and €204 million. It should be noted that sales can of course fluctuate, depending on changes in taxes, duties and energy costs.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
Vonovia has established a subsidiary, Vonovia Energie Service GmbH (VESG), to sell electricity (and heating) directly to tenants. In each new lease, tenants are given an opt-in option to purchase green electricity from renewable sources. Our certified green electricity comes 100 percent from renewable energies. Out of conviction, we only offer green electricity and thus make an important contribution to the energy transition. This also makes it easier for our tenants to purchase green electricity and nudges them towards green electricity options. With the offer being active for all tenants, the task is to introduce more tenants to the VESG. Therefore, the offer will be gradually expanded for all new leases. VESG does not generate the energy itself, but buys and sells it via the electricity market, where prices are volatile. A cost estimate is therefore not made.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased value of fixed assets

Company-specific description
[Situation] Electricity demand in Germany will increase significantly due to the rising number of heat pumps and the expansion of electromobility. Studies assume an increase of around 19% by 2030. At the same time, the shutdown of nuclear energy and coal-fired power generation will reduce supply. In the coming years, photovoltaics (PV) will become mandatory for new buildings and roof renovations in some German states and individual cities. This is currently also anchored in the draft law "Klimaschutz Sofortprogramm 2022" for all of Germany. The amendment to the Renewable Energy Sources Act (EEG) 2021 will make it possible to implement tenant electricity economically and thus promote tenant participation in the energy transition.

[Task] Our neighborhoods must become independent energy producers, enabling renewable energy to be produced and consumed on site. There is already a high potential for PV expansion, as around 40% of multifamily buildings are already economically and technically suitable for PV today.

[Action] For Vonovia, there is a great opportunity in the expansion and operation of PV systems on the roofs of its own real estate portfolio. The aim is to supply tenants with local green electricity and create the basis for CO2-neutral buildings. With favorable tenant electricity tariffs, we can offer our customers added value and position Vonovia as a pioneer of the real estate industry in the decentralized energy transition – while, at the same time, creating a business area with a relevant contribution to EBITDA.
[Result] In 2022, Vonovia generated 16.000 MWh renewable energy from photovoltaic systems.

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
950000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The figure indicates the sales potential for the period up to 2030, if we continuously increase our PV capacities until then and expand the yearly installation by a factor of 10. The total installed output in 2030 shall be 280 MWp. As a result of the merger with Deutsche Wohnen, the potential for PV expansion has increased by around 38% compared with previous calculations. This potential is already included here.

Cost to realize opportunity
475000000

Strategy to realize opportunity and explanation of cost calculation
One of the most important ways in which we contribute to the decentralized supply of renewable energies is by installing PV systems on the roofs of our properties. This engagement is summarized in our PV program, aiming at the carbon optimization of the real estate portfolio as part of the neighborhood concept. The task is to continue installing PV systems on all suitable roofs, to meet our target of installing photovoltaic systems with a total output of >280 MWp until 2030. To take advantage of the opportunity, it is necessary to gradually build up internal structures (FTE, know-how, ...) A potential analysis for the selection of roof areas has already been carried out. Furthermore, it is important to make the complexity of tenant electricity models manageable. This is where Vonovia's scaling effect comes into play. As a result, we increased installed capacity of 19.3 MWp (with 533 photovoltaic systems).

The value here describes the investment sums (capex), added up to the year 2030, knowing that the PV plants work on average 25 years. Personnel and operational costs are included in the calculation.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan
Yes, we have a climate transition plan which aligns with a 1.5°C world

Publicly available climate transition plan
Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan
We have a different feedback mechanism in place

Description of feedback mechanism
We have committed to our climate path with binding climate targets on the way to a virtually climate-neutral building stock by 2045. To achieve the targets set out in this climate path, we have created the Sustainability Performance Index (SPI). This SPI consists of six different sustainability indicators - including the CO2 intensity of the existing building stock and the primary energy requirement for new buildings. These are provided with specific annual targets. The SPI is part of the management system as well as an integral part of the remuneration system of the Management Board and the Top management level (Long term incentive plan, LTIP). A decision on this remuneration system was taken at the 2021 AGM. The CO2-intensity is monitored and forecast at least on a quarterly basis.

Frequency of feedback collection
More frequently than annually

Attach any relevant documents which detail your climate transition plan (optional)
https://report.vonovia.de/2022/nachhaltigkeitsbericht/en/

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future
<Not Applicable>

Explain why climate-related risks and opportunities have not influenced your strategy
<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios: Customized publicly available physical scenario	Business activity	1.6ºC – 2ºC	Physical climate scenarios are part of our overarching climate scenario analysis assessing the impact of various hazards — for example heat stress and temperature increase, drought, heavy precipitation, flooding and storms — in different time horizons until 2030, 2045 and 2085. During the reporting year, Vonovia developed an IT tool in accordance with EU taxonomy requirements in order to analyze the physical risks associated with climate change. This tool enables physical climate risks to be identified and evaluated for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5min and RCP8.5 max). This climate risk tool covers Vonovia's portfolio and development projects in Germany, Austria and Sweden and allows material negative impacts on our business activities due to the effects of climate change to be analyzed at portfolio and property level. The climate risks examined using this tool are heat, cold, drought, increases in precipitation, wind and storms, snow loads and flooding. Depending on the granularity of the available data source, we measure climate risks at the building or neighborhood level and are able to complete a climate risk assessment for each building in the portfolio.
Physical climate scenarios: Customized publicly available physical scenario	Business activity	2.1ºC - 3ºC	Physical climate scenarios are part of our overarching climate scenario analysis assessing the impact of various hazards — for example heat stress and temperature increase, drought, heavy precipitation, flooding and storms — in different time horizons until 2030, 2045 and 2085. During the reporting year, Vonovia developed an IT tool in accordance with EU taxonomy requirements in order to analyze the physical risks associated with climate change. This tool enables physical climate risks to be identified and evaluated for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5min and RCP8.5 max). This climate risk tool covers Vonovia's portfolio and development projects in Germany, Austria and Sweden and allows material negative impacts on our business activities due to the effects of climate change to be analyzed at portfolio and property level. The climate risks examined using this tool are heat, cold, drought, increases in precipitation, wind and storms, snow loads and flooding. Depending on the granularity of the available data source, we measure climate risks at the building or neighborhood level and are able to complete a climate risk assessment for each building in the portfolio.
Physical climate scenarios: Customized publicly available physical scenario	Business activity	3.1ºC - 4ºC	Physical climate scenarios are part of our overreaching climate scenario analysis assessing the impact of various hazards — for example heat stress and temperature increase, drought, heavy precipitation, flooding and storms — in different time horizons until 2030, 2045 and 2085. During the reporting year, Vonovia developed an IT tool in accordance with EU taxonomy requirements in order to analyze the physical risks associated with climate change. This tool enables physical climate risks to be identified and evaluated for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5min and RCP8.5 max). This climate risk tool covers Vonovia's portfolio and development projects in Germany, Austria and Sweden and allows material negative impacts on our business activities due to the effects of climate change to be analyzed at portfolio and property level. The climate risks examined using this tool are heat, cold, drought, increases in precipitation, wind and storms, snow loads and flooding. Depending on the granularity of the available data source, we measure climate risks at the building or neighborhood level and are able to complete a climate risk assessment for each building in the portfolio.
Physical climate scenarios: Customized publicly available physical scenario	Business activity	4.1ºC and above	Physical climate scenarios are part of our overreaching climate scenario analysis assessing the impact of various hazards — for example heat stress and temperature increase, drought, heavy precipitation, flooding and storms — in different time horizons until 2030, 2045 and 2085. During the reporting year, Vonovia developed an IT tool in accordance with EU taxonomy requirements in order to analyze the physical risks associated with climate change. This tool enables physical climate risks to be identified and evaluated for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5min and RCP8.5 max). This climate risk tool covers Vonovia's portfolio and development projects in Germany, Austria and Sweden and allows material negative impacts on our business activities due to the effects of climate change to be analyzed at portfolio and property level. The climate risks examined using this tool are heat, cold, drought, increases in precipitation, wind and storms, snow loads and flooding. Depending on the granularity of the available data source, we measure climate risks at the building or neighborhood level and are able to complete a climate risk assessment for each building in the portfolio.
Transition scenarios: Bespoke transition scenario	Business activity	2.1ºC - 3ºC	We have developed a climate path with binding targets for 2030 and 2045 as well as annual interim steps with the scientific support of the Fraunhofer Institute ISE to evaluate the effectiveness of these measures. This plan reflects our own targets, the average trend in the industry and the federal government's targets for 2045. Scientific targets like the trajectory defined by the Carbon Risk Real Estate Monitor (CRREM) were also taken into account when developing the scenario analysis. We also work with "right.based on science" and use their XDC model to forecast the climate impact of our measures. 1) Standard scenario: energy-efficient refurbishment is still a fundamental component of our climate action strategy (efficiency first). In 2017, we took an initial step by setting an average annual refurbishment target of 2.5 - 3% of the German portfolio– a clear indication that we take our responsibilities seriously, since the nationwide trend in Germany is a refurbishment rate of 1%. However, the extent of refurbishment needs to be increased in this scenario, ideally to 60%. One way to achieve this is through improved energy efficiency.
Transition scenarios: Bespoke transition scenario	Business activity	1.6ºC – 2ºC	We have developed a climate path with binding targets for 2030 and 2045 as well as annual interim steps with the scientific support of the Fraunhofer Institute ISE to evaluate the effectiveness of these measures. This plan reflects our own targets, the average trend in the industry and the federal government's targets for 2045. Scientific targets like the trajectory defined by the Carbon Risk Real Estate Monitor (CRREM) were also taken into account when developing the scenario analysis. We also work with right.based on science and use their XDC model to forecast the climate impact of our measures. 2) Hybrid scenario: the first scenario is augmented with the replacement of heating units powered solely by fossil fuels with modern heating systems that are at least partially powered by renewable energy. Optimizing the heating systems with modern gas-powered condensing boilers and additional solar thermal energy makes it possible to reduce emissions further.
Transition scenarios: Bespoke transition scenario	Business activity	1.5ºC	We have developed a climate path with binding targets for 2030 and 2045 as well as annual interim steps with the scientific support of the Fraunhofer Institute ISE to evaluate the effectiveness of these measures. This plan reflects our own targets, the average trend in the industry and the federal government's targets for 2045. Scientific targets like the trajectory defined by the Carbon Risk Real Estate Monitor (CRREM) were also taken into account when developing the scenario analysis. We also work with right.based on science and use their XDC model to forecast the climate impact of our measures. 3.) Climate-neutral scenario: innovations are required in order to make the full transition to climate neutrality at a reasonable cost. Decentralized power generation and local consumption in the neighborhoods will define the energy transition. The focus must therefore be on increasing the use of renewable energies (fuel switch) and the corresponding neighborhood systems. The power supply has a vital role to play in terms of sector integration. Integrating the power, heat and transport sectors (sector coupling) can significantly boost the efficiency and autonomy of a housing estate. In the future, community development plans will focus on generating green power and green heat in a neighborhood for local consumption, or at the very least using green district heating to provide a climate-friendly heat supply. The energy concept is backed up by infrastructure for sustainable mobility solutions.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

How effective are measures to increase energy-efficiency of our portfolio?
How can Vonovia achieve its own goal - and that of the German federal government - of a climate-neutral building stock by 2045?
Will our building portfolio be affected by physical hazards in the future?

Results of the climate-related scenario analysis with respect to the focal questions

Transitory scenario analysis:
As a result of our scenario analysis, and in line with the targets of the Initiative.Wohnen.2050, a target has been defined for carbon intensity of below 5 kg CO2e/m² of rentable area per year. The resulting climate plan shows clearly that multiple measures are required in order to achieve climate neutrality by 2045. We analyzed several scenarios that indicated that refurbishment, both as currently practiced and in a more intensive form, is not enough. The required climate trajectory can only be achieved by combining higher energy efficiency, a much greater share of renewable energy sources in the energy supply and further innovative technologies to produce and store energy on a decentralized basis in neighborhoods.

Developing the climate plan and the three scenarios showed us how important it is for us to find solutions that go beyond conventional modernization measures. We are focusing on the intelligent networking of heat and power in our neighborhoods and technological developments to make buildings more energy-efficient. Vonovia uses projects to investigate and test potential solutions at a reasonable cost. The Innovation and Business Building (I&BB) department is dedicated to developing new fields of business related to energy generation, storage, distribution and mobility. This also includes implementing pilot projects in cooperation with partners from various disciplines. The Climate-neutral Portfolio/Strategic Projects department is responsible for strategic planning to prepare the path to a virtually climate-neutral portfolio by 2045.

Physical scenario analysis:
Crises or disasters such as floods, earthquakes, extreme weather events, etc., could have an impact on our real estate portfolio and require specific crisis management measures. Physical climate risks like these refer to longer-term shifts in general climatic conditions. We have assessed the risk of business continuity in disasters/crisis situations as being associated with an amount of loss of € 5–40 million and a probability of occurrence of 5–39%.
As long as these risks remain insurable, we do not see physical hazards as a big threat to our business. However, it remains an important factor to consider for future risk and scenario analysis, to continuously update results with latest scientific knowledge.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	The insight that energy-efficient renovations of the building envelope are not sufficient to achieve the goal of a virtually climate-neutral building stock by 2045 has led to a strategic addition to the expansion of renewable energies: One of the most important ways in which we contribute to the decentralized supply of renewable energies is by installing PV systems on the roofs of our properties. Therefore, the task is to significantly increase our generation capacity over the next few years. We also aim to install photovoltaic systems on all suitable roofs. In light of the increasing regional demand for photovoltaic systems, we have included expanding our use of photovoltaic systems as a key measure of the performance of our regional managing directors. Substantial strategic decision: The most important component of this is the expansion of photovoltaics on the roofs of our building stock. The decentrally generated electricity can either be fed into the grid or — as so-called tenant electricity — consumed directly on site. The task is to continue installing PV systems on all suitable roofs, to meet our target of installing photovoltaic systems with a total output of >280 MWp until 2030. As the housing company moves towards climate neutrality for all its existing buildings, it is now fitting all suitable roofs with solar panels. To achieve this goal, Vonovia will increase its annual installation capacity tenfold by 2024. It is aiming to produce 280 MWp by 2030 and avoid 133,000 tonnes of CO2 per year. By 2050 all suitable roofs – 30,000 in all – should be fitted with solar panels. We are also testing new technical approaches to the generation, storage and use of renewable energies, for example in the form of neighborhood sector coupling and the use of hydrogen electrolysers. Here, we see great potential for making optimum use of the energy generated on site in the neighborhood.
Supply chain and/or value chain	Yes	The risk of climate-related emerging and current regulations, as well as changing customer behavior towards more climate-friendly living options has led to a comprehensive consideration of climate-relevant parameters in our supply chain and construction work in short- to long-term time horizons: We evaluated the ecological effects of different construction methods, from reinforced concrete to solid wood construction. Also, with the expansion of our building activities, the importance of the building materials used is also increasing. Concrete in particular is a CO2-intensive building material, but other materials also play a role in the climate balance. Therefore, we decided to analyze total footprint early in project planning and capture footprints for various materials and construction types. Substantial strategic decision: In 2021, Vonovia took the strategic decision to focus on climate-related topics of building materials in the Building Materials Conference ("Baustoffkonferenz""). On March 23, 2022, the dialogue series "Perspectives on the Future of Building" kicked off in Berlin. Representatives from science, business and politics discussed the question of how the housing and construction industry can become climate-neutral and what challenges need to be addressed to achieve this.
Investment in R&D	Yes	In striving to achieve a virtually climate-neutral building stock by 2045, Vonovia has defined its neighborhoods as a central focal point. Innovation and a holistic view of neighborhoods in terms of social, ecological and economic factors are crucial when it comes to mastering the energy revolution. The change in strategy towards more research and innovation is clearly based on the realization that we cannot achieve our climate targets using conventional methods. Vonovia is therefore investing in numerous research and development projects to test both neighborhood-based supply approaches (e.g., with hydrogen) and new technologies to further increase efficiency. A new division has been set up for this purpose - the Innovation & Business Building Department. Substantial strategic decision: A milestone was reached with the commissioning of the Energy Center of the Future in Bochum-Weitmar. The innovative research laboratory supplies 81 residential units in the neighborhood using innovative technologies (e.g., electrolyzer, fuel cell, or hydrogen storage facility). The electricity required is also generated locally by the center's own photovoltaic systems. Thanks to the center's initial research results, higher efficiency levels can already be achieved with cold district heating 2.0. This will make the neighborhood self-sufficient in its heating supply in mild winters in the future. The center also features a battery storage system and a hydrogen storage facility. Together with the energy provider E.ON, we are cooperatively developing contracting solutions to set new industry standards for the technical refurbishment of existing neighborhoods. The basis for this is the data-supported analysis of entire neighborhoods to identify potential. Modular solutions enable rapid scalability. A first cooperation project is currently being developed in Hannover. Since 2018, we have been partnering with dena to transfer the Dutch Energiesprong principle to Germany. Energiesprong is a novel renovation concept that combines high living comfort, minimal renovation times and an innovative financing model with a future-proof energy standard. The special feature of the Energiesprong principle, lies in a high degree of prefabrication in serial production. In the coming years, we intend to demonstrate market readiness in pilot projects and move into the scaling phase.
Operations	Yes	Our own business operations account for only around 3-4% of our company's CO2 emissions. 96% are generated by the operation of the building portfolio, mainly through the heat consumption of our tenants. Nevertheless, we also take care to optimize our business processes internally in order to save resources as much as possible. Our vehicle fleet, our tools and appliances, our own office buildings and the behavior of our employees all offer opportunities to make a difference, e.g., by transitioning the fleet to low-emission vehicles, using power-saving electrical appliances for work in neighborhoods, buying green power for office buildings and avoiding business travel and transport. In this respect, climate-related developments also have a - albeit small - influence on the corporate strategy in terms of greater awareness at the operational level for resource-efficient measures. We completed a DIN EN 16247-1 energy audit in Germany in 2020. The areas that were identified for improvement can be applied to the entire Group due to the homogeneity of asset structures and consumption patterns at Vonovia. One of our focus areas in 2021 was the switch to using battery-powered garden tools, e.g., leaf blowers and hedge trimmers. We plan to replace around 1,000 gasoline-powered tools with more environmentally friendly battery-powered versions. The new appliances will be highly recyclable and have significantly lower carbon and noise emissions, which will also benefit our tenants and improve the health of our employees. Substantial strategic impact: The company is also working towards using and generating energy in a manner which is better for the environment by switching all of the administrative buildings that it owns over to green electricity provided by VESG. This switchover started on January 1, 2022, with around 60 sites concentrated in the South region. In the future, all of these sites will be supplied with carbon-free green electricity. All office locations of BUWOG in Austria have used certified green electricity (UZ46) since 2021. In addition to improving our carbon footprint, this also optimizes our internal processes. We want to roll this model out to other regions in the near future.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs Capital expenditures	In its three scenarios, Vonovia's climate path for achieving a climate-neutral building stock envisages the continuation and expansion of energy-efficient building renovations (1), the switch to modern heating systems (2) and the consistent expansion of renewable energies and new technologies. This has an impact on the company's financial planning: - Continued high levels of investment in energy modernization, making use of new technologies and processes such as Energiesprong. The introduction of a CO2 price in the building sector has a steering effect here, as financial flows are diverted to the modernization of buildings with particularly high emissions. At the same time, investing in energy modernization can also increase revenues, because it creates an opportunity in terms of cost savings and preparation for future developments (such as higher costs in the form of taxes relating to energy consumption or resource conservation, for example). - Replacement of outdated fossil-fuel boilers with modern heating systems. Here, too, investment levels are expected to grow, having an impact on direct costs. - Strong expansion of investments in renewable energies: On the one hand, in the expansion of solar systems, heat pumps, etc., and on the other hand, above all, in the expansion of neighborhood systems that intelligently link the areas of electricity, heating and mobility via sector coupling. Vonovia has therefore significantly increased its investment volume in the research and development of new technologies and set up a new research and development department with around 20 employees. - In the area of new construction, Vonovia is investing significantly more in sustainable new construction due to the risks and opportunities arising from climate-related issues. This includes intelligent water management systems as well as high efficiency standards for the new buildings or the development of suitable mobility systems such as car and cargo bike sharing or electric mobility. - In the residential environment, long-term forecasts for changing climatic conditions are leading, for example, to the expansion of water retention systems and changes to more climate-resistant trees and shrubs.

C3.5

(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s climate transition?

	Identification of spending/revenue that is aligned with your organization’s climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	Yes, we identify alignment with both our climate transition plan and a sustainable finance taxonomy	At both the company and activity level

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization’s climate transition.

Financial Metric
Revenue/Turnover

Type of alignment being reported for this financial metric
Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported
Climate change mitigation

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)
949000000

Percentage share of selected financial metric aligned in the reporting year (%)
10.6

Percentage share of selected financial metric planned to align in 2025 (%)
10.6

Percentage share of selected financial metric planned to align in 2030 (%)
10.6

Describe the methodology used to identify spending/revenue that is aligned
Vonovia has not defined strategic objectives for financial metrics aligned with EU Taxonomy by 2025 or 2030. We plan to continuously improve our current degree of EU Taxonomy alignment.
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.
When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia’s business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures, through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).
Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.
Turnover from the condominium administration business, energy sales from VESG’s energy trading activities, Deutsche Wohnen’s Care segment, and multimedia are not taxonomy-eligible.
Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Financial Metric

CAPEX

Type of alignment being reported for this financial metric
Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported
Climate change mitigation

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)
774000000

Percentage share of selected financial metric aligned in the reporting year (%)
31.2

Percentage share of selected financial metric planned to align in 2025 (%)
31.2

Percentage share of selected financial metric planned to align in 2030 (%)
31.2

Describe the methodology used to identify spending/revenue that is aligned
Vonovia has not defined strategic objectives for financial metrics aligned with EU Taxonomy by 2025 or 2030. We plan to continuously improve our current degree of EU Taxonomy alignment.
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures, through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).
Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.
Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Financial Metric
OPEX

Type of alignment being reported for this financial metric
Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported
Climate change mitigation

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)
49000000

Percentage share of selected financial metric aligned in the reporting year (%)
12.3

Percentage share of selected financial metric planned to align in 2025 (%)
12.3

Percentage share of selected financial metric planned to align in 2030 (%)
12.3

Describe the methodology used to identify spending/revenue that is aligned
Vonovia has not defined strategic objectives for financial metrics aligned with EU Taxonomy by 2025 or 2030. We plan to continuously improve our current degree of EU Taxonomy alignment.
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures, through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).
Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

C3.5b

(C3.5b) Quantify the percentage share of your spending/revenue that was associated with eligible and aligned activities under the sustainable finance taxonomy in the reporting year.

Economic activity
Construction of new buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
Turnover

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
354000000

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
3.9

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
3.9

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
0

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
Turnover associated with new construction (activity 7.1) is deemed taxonomy-aligned, if the relevant buildings have a primary energy demand that is at least ten percent below the national standard for nearly zero-energy buildings. Vonovia determines the global warming potential for each phase of the building life cycle using a model calculation of life cycle emissions.

Turnover generated from the acquisition and ownership of buildings (activity 7.7) is deemed taxonomy-aligned, if the relevant buildings (constructed before Dec. 31, 2020) have been assigned energy efficiency class A (or better) or are among the top 15 per cent of regional or national housing stock in terms of primary energy demand in operation. Vonovia checks compliance with the relevant threshold values by obtaining an energy performance certificate for each building. We base our assessment of the top 15 per cent on relevant threshold values for primary energy demand, which were determined by external experts in a recent benchmark study.

Turnover from electricity generation using solar photovoltaic technology (activity 4.1) is treated as a direct climate change mitigation measure, meaning that no additional technical criterion needs to be assessed.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
We are committed to our human rights due diligence obligations and align our conduct with internationally recognized frameworks such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Vonovia adopts a Group-wide approach to meeting minimum safeguards: comprehensive procedures forming part of the compliance management system, including Group-wide guidelines and complaints mechanisms, have been put in place to prevent and uncover violations.

A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Acquisition and ownership of buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
Turnover

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
593000000

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
6.6

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
6.6

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
0

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
Turnover associated with new construction (activity 7.1) is deemed taxonomy-aligned, if the relevant buildings have a primary energy demand that is at least ten percent below the national standard for nearly zero-energy buildings. Vonovia determines the global warming potential for each phase of the building life cycle using a model calculation of life cycle emissions.

Turnover generated from the acquisition and ownership of buildings (activity 7.7) is deemed taxonomy-aligned, if the relevant buildings (constructed before Dec. 31, 2020) have been assigned energy efficiency class A (or better) or are among the top 15 per cent of regional or national housing stock in terms of primary energy demand in operation. Vonovia checks compliance with the relevant threshold values by obtaining an energy performance certificate for each building. We base our assessment of the top 15 per cent on relevant threshold values for primary energy demand, which were determined by external experts in a recent benchmark study.

Turnover from electricity generation using solar photovoltaic technology (activity 4.1) is treated as a direct climate change mitigation measure, meaning that no additional technical criterion needs to be assessed.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis

Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
We are committed to our human rights due diligence obligations and align our conduct with internationally recognized frameworks such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Vonovia adopts a Group-wide approach to meeting minimum safeguards: comprehensive procedures forming part of the compliance management system, including Group-wide guidelines and complaints mechanisms, have been put in place to prevent and uncover violations.

A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Electricity generation using solar photovoltaic technology

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
Turnover

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
1000000

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
0

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
0

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
0

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
Turnover associated with new construction (activity 7.1) is deemed taxonomy-aligned, if the relevant buildings have a primary energy demand that is at least ten percent below the national standard for nearly zero-energy buildings. Vonovia determines the global warming potential for each phase of the building life cycle using a model calculation of life cycle emissions.

Turnover generated from the acquisition and ownership of buildings (activity 7.7) is deemed taxonomy-aligned, if the relevant buildings (constructed before Dec. 31, 2020) have been assigned energy efficiency class A (or better) or are among the top 15 per cent of regional or national housing stock in terms of primary energy demand in operation. Vonovia checks compliance with the relevant threshold values by obtaining an energy performance certificate for each building. We base our assessment of the top 15 per cent on relevant threshold values for primary energy demand, which were determined by external experts in a recent benchmark study.

Turnover from electricity generation using solar photovoltaic technology (activity 4.1) is treated as a direct climate change mitigation measure, meaning that no additional technical criterion needs to be assessed.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
We are committed to our human rights due diligence obligations and align our conduct with internationally recognized frameworks such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Vonovia adopts a Group-wide approach to meeting minimum safeguards: comprehensive procedures forming part of the compliance management system, including Group-wide guidelines and complaints mechanisms, have been put in place to prevent and uncover violations.

A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Renovation of existing buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
239000000

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
9.6

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
9.6

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
0

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia’s business

model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
At Vonovia, capital expenditure associated with the renovation of existing buildings (activity 7.2) always relates to energy-efficient modernization. In Germany, Vonovia checks compliance with this criterion through energy-efficiency assessments, which are carried out prior to each renovation and determine the savings potential. If these are not available, the savings are documented by the energy performance certificates. This applies to all countries.

Capital expenditure on heating modernization, charging stations and wall boxes, measurement technology and smart metering, and photovoltaic systems is generally treated as a direct climate protection measure, meaning that no additional technical criteria need to be assessed. Acquisition and ownership of buildings (activity 7.7) also includes capital expenditure from acquisitions, development to hold, investments not including energy efficiency measures (e.g., refurbishment of vacant apartments or major maintenance measures) or other internal expenses that can be capitalized. These qualify as taxonomy-aligned, if the building-related technical valuation criteria are met.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
We are committed to our human rights due diligence obligations and align our conduct with internationally recognized frameworks such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Vonovia adopts a Group-wide approach to meeting minimum safeguards: comprehensive procedures forming part of the compliance management system, including Group-wide guidelines and complaints mechanisms, have been put in place to prevent and uncover violations.

A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Installation, maintenance and repair of energy efficiency equipment

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
80000000

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
3.2

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
3.2

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
0

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
At Vonovia, capital expenditure associated with the renovation of existing buildings (activity 7.2) always relates to energy-efficient modernization. In Germany, Vonovia checks compliance with this criterion through energy-efficiency assessments, which are carried out prior to each renovation and determine the savings potential. If these are not available, the savings are documented by the energy performance certificates. This applies to all countries.

Capital expenditure on heating modernization, charging stations and wall boxes, measurement technology and smart metering, and photovoltaic systems is generally treated as a direct climate protection measure, meaning that no additional technical criteria need to be assessed. Acquisition and ownership of buildings (activity 7.7) also includes capital expenditure from acquisitions, development to hold, investments not including energy efficiency measures (e.g., refurbishment of vacant apartments or major maintenance measures) or other internal expenses that can be capitalized. These qualify as taxonomy-aligned, if the building-related technical valuation criteria are met.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis

Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
We are committed to our human rights due diligence obligations and align our conduct with internationally recognized frameworks such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Vonovia adopts a Group-wide approach to meeting minimum safeguards: comprehensive procedures forming part of the compliance management system, including Group-wide guidelines and complaints mechanisms, have been put in place to prevent and uncover violations.

A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
1000000

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
0

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
0

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
0

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
At Vonovia, capital expenditure associated with the renovation of existing buildings (activity 7.2) always relates to energy-efficient modernization. In Germany, Vonovia checks compliance with this criterion through energy-efficiency assessments, which are carried out prior to each renovation and determine the savings potential. If these are not available, the savings are documented by the energy performance certificates. This applies to all countries.

Capital expenditure on heating modernization, charging stations and wall boxes, measurement technology and smart metering, and photovoltaic systems is generally treated as a direct climate protection measure, meaning that no additional technical criteria need to be assessed. Acquisition and ownership of buildings (activity 7.7) also includes capital expenditure from acquisitions, development to hold, investments not including energy efficiency measures (e.g., refurbishment of vacant apartments or major maintenance measures) or other internal expenses that can be capitalized. These qualify as taxonomy-aligned, if the building-related technical valuation criteria are met.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
We are committed to our human rights due diligence obligations and align our conduct with internationally recognized frameworks such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Vonovia adopts a Group-wide approach to meeting minimum safeguards: comprehensive procedures forming part of the compliance management system, including Group-

wide guidelines and complaints mechanisms, have been put in place to prevent and uncover violations.

A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
7000000

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
0.3

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
0.3

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
0

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried

out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
At Vonovia, capital expenditure associated with the renovation of existing buildings (activity 7.2) always relates to energy-efficient modernization. In Germany, Vonovia checks compliance with this criterion through energy-efficiency assessments, which are carried out prior to each renovation and determine the savings potential. If these are not available, the savings are documented by the energy performance certificates. This applies to all countries.

Capital expenditure on heating modernization, charging stations and wall boxes, measurement technology and smart metering, and photovoltaic systems is generally treated as a direct climate protection measure, meaning that no additional technical criteria need to be assessed. Acquisition and ownership of buildings (activity 7.7) also includes capital expenditure from acquisitions, development to hold, investments not including energy efficiency measures (e.g., refurbishment of vacant apartments or major maintenance measures) or other internal expenses that can be capitalized. These qualify as taxonomy-aligned, if the building-related technical valuation criteria are met.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
We are committed to our human rights due diligence obligations and align our conduct with internationally recognized frameworks such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Vonovia adopts a Group-wide approach to meeting minimum safeguards: comprehensive procedures forming part of the compliance management system, including Group-wide guidelines and complaints mechanisms, have been put in place to prevent and uncover violations.

A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Installation, maintenance and repair of renewable energy technologies

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
6000000

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
0.2

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
0.2

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
0

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
At Vonovia, capital expenditure associated with the renovation of existing buildings (activity 7.2) always relates to energy-efficient modernization. In Germany, Vonovia checks compliance with this criterion through energy-efficiency assessments, which are carried out prior to each renovation and determine the savings potential. If these are not available, the savings are documented by the energy performance certificates. This applies to all countries.

Capital expenditure on heating modernization, charging stations and wall boxes, measurement technology and smart metering, and photovoltaic systems is generally treated as a direct climate protection measure, meaning that no additional technical criteria need to be assessed. Acquisition and ownership of buildings (activity 7.7) also includes capital expenditure from acquisitions, development to hold, investments not including energy efficiency measures (e.g., refurbishment of vacant apartments or major maintenance measures) or other internal expenses that can be capitalized. These qualify as taxonomy-aligned, if the building-related technical valuation criteria are met.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for

the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
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A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Acquisition and ownership of buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
443000000

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
17.9

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
17.9

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
0

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

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Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
At Vonovia, capital expenditure associated with the renovation of existing buildings (activity 7.2) always relates to energy-efficient modernization. In Germany, Vonovia checks compliance with this criterion through energy-efficiency assessments, which are carried out prior to each renovation and determine the savings potential. If these are not available, the savings are documented by the energy performance certificates. This applies to all countries.

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Do no significant harm requirements met
Yes

Details of do no significant harm analysis
Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
We are committed to our human rights due diligence obligations and align our conduct with internationally recognized frameworks such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Vonovia adopts a Group-wide approach to meeting minimum safeguards: comprehensive procedures forming part of the compliance management system, including Group-wide guidelines and complaints mechanisms, have been put in place to prevent and uncover violations.

A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Acquisition and ownership of buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
OPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
49000000

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
12.3

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
12.3

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
0

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Own performance
Transitional activity
Activity enabling mitigation

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
In accordance with Vonovia's business model, the relevant criteria for determining taxonomy-aligned operating expenses stem from activity 7.7. This is non-capitalized maintenance (usually minor maintenance). In addition to maintenance services provided by third parties, this also includes services provided internally by the company's own craftsmen's organization . The denominator therefore covers expenses for upkeep and repair (maintenance) including technicians' and administrative costs of the internal craftsmen's organization. Vonovia uses an allocation factor to determine the taxonomy-aligned data. This allocation factor for maintenance expenses is based on the area of the building (in square meters). This share is multiplied by the taxonomy-eligible operating expenses to calculate the numerator. The share of green sqm in relation to the total area is 12.9 %.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
Objective 2 Climate Change Adaptation: For the robust climate risk and vulnerability assessment, Vonovia uses an IT tool to identify and evaluate physical climate risks for the Group-wide portfolio on a continuous basis using the prescribed climate scenarios (RCP2.6, RCP4.5 and RCP8.5) . The risk assessment based on scenario RCP4.5 identified no material risk for any of the climate-related hazards up to 2045. Therefore, no adaptation plan is required in accordance. As part of the neighborhood strategy, potential adaptations are to be defined at portfolio level in the future and subsequently implemented individually for the properties or neighborhoods, for which there are material risks at the corresponding level.

Objective 3 Water and marine resources: No criteria need to be assessed, as these do not apply to taxonomy-alignment of residential building units.

Objective 4 Waste: The requirements are met through the implementation of the German Circular Economy Act (KrWG) or by means of other national legislation. The photovoltaic systems installed by Vonovia also meet the requirements for preventing significant harm to EU environmental objective 4 on account of their design and service life.

Objective 5 Pollution: Compliance with certain EU directives must be ensured. This is regulated by law in Germany, Austria and Sweden. Vonovia only purchases and uses finished construction products that are approved within the EU, bear the CE mark, meaning that they have an EU declaration of conformity, which is consistent with the applicable EU legislation. Compliance with statutory requirements is defined in Vonovia's Business Partner Code that all subcontractors and suppliers have to sign. Vonovia has established a toxic materials management system to ensure the safe handling of toxic materials.

Objective 6 Biodiversity: Vonovia's economic activities do not significantly harm the achievement of protection and restoration of biodiversity and ecosystems, as Vonovia only builds in designated areas. Relevant aspects are taken into account by the competent authorities in the approval procedures preceding such activities.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
We are committed to our human rights due diligence obligations and align our conduct with internationally recognized frameworks such as the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.

Vonovia adopts a Group-wide approach to meeting minimum safeguards: comprehensive procedures forming part of the compliance management system, including Group-wide guidelines and complaints mechanisms, have been put in place to prevent and uncover violations.

A due diligence process to prevent business activities negatively impacting people and the environment forms the core element of compliance with minimum safeguards. Vonovia implements this process based on the OECD guidelines and has implemented all recommended due diligence steps: integrating human rights due diligence into strategy and processes and adopting a declaration of commitment, performing a regular risk analysis to identify and assess potentially negative impacts in consultation with stakeholders, implementing measures to end, prevent, mitigate and correct any failings in this regard, including monitoring such measures and reviewing their effectiveness, and communicating with the public regarding the approach taken and the measures implemented in order to fulfill human rights due diligence obligations. We provide more detailed information on how we met our responsibility to respect human rights in our non-financial statement, in our sustainability report as well as in our public human rights policy.

Economic activity
Construction of new buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
Turnover

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
234000000

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
2.6

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

Economic activity
Acquisition and ownership of buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
Turnover

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
7414000000

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
82.5

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

Economic activity
Electricity generation using solar photovoltaic technology

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
Turnover

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
0

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
0

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

Economic activity
Renovation of existing buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
256000000

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
10.3

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

Economic activity
Installation, maintenance and repair of energy efficiency equipment

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
0

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
0

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

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Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

Economic activity
Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
0

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
0

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

Economic activity
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
0

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
0

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

Economic activity
Installation, maintenance and repair of renewable energy technologies

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
0

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
0

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

Economic activity
Acquisition and ownership of buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
CAPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
1359000000

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
54.7

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

Economic activity
Acquisition and ownership of buildings

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
OPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
331000000

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
82.9

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
In order to determine the key figures (KPIs) that are to be reported, the taxonomy-eligible and taxonomy-aligned net turnover, capital expenditure and operating expenses are calculated as a share of the total net turnover, capital expenditure and operating expenses that are to be taken into account in accordance with EU taxonomy requirements. The definition of each KPI is based on Annex I of the Delegated Act on Article 8 on the content and presentation of the information to be disclosed.

When it comes to capital expenditure, the EU Taxonomy Regulation makes a distinction between different categories of capital expenditure. Due to Vonovia's business model, it largely invests (activity 7.2. and 7.7.) in assets or processes associated with economic activities that are taxonomy-aligned (category A). It also makes investments (activity 7.3.–7.6.) relating to the acquisition of products from taxonomy-eligible economic activities and individual measures through which the target activities are carried out in a low-carbon manner or the emission of greenhouse gases is lowered (category C).

Duplicate counting is avoided by means of direct allocation of the taxonomy-eligible or taxonomy-aligned turnover, capital expenditure and operating expenses to a taxonomy-eligible or taxonomy-aligned economic activity.

Turnover from the condominium administration business, energy sales from VESG's energy trading activities, Deutsche Wohnen's Care segment, and multimedia are not taxonomy-eligible.

Please find detailed information on the calculation methodology and supporting information in our Annual Report 2022.

Technical screening criteria met
No

Details of technical screening criteria analysis

Do no significant harm requirements met
No

Details of do no significant harm analysis

Minimum safeguards compliance requirements met
No

Details of minimum safeguards compliance analysis

C3.5c

(C3.5c) Provide any additional contextual and/or verification/assurance information relevant to your organization's taxonomy alignment.

We report on our implementation of the EU Taxonomy including our degree of Taxonomy-alignment in our non-financial statement in our Annual Report. The non-financial and therefore our taxonomy reporting has been audited with limited assurance by an external auditor. The auditor's report has been published as part of the Annual Report.

Vonovia has emitted Green Bonds and Social Bonds. We have published a Sustainable Finance Framework, which has been reviewed by ISS ESG. In its Second Party Opinion ISS ESG has evaluated the framework's alignment with the ICMA Green Bond Principles, ICMA Social Bond Principles, ICMA Sustainability Bond Guidelines as well as an assessment of the alignment of the Framework with the requirements of the EU Taxonomy.

Attachments:

https://report.vonovia.de/2022/q4/app/uploads/Vonovia-SE_Annual-Report-2022.pdf

https://ir-api.eqs.com/media/document/a79fe32f-4567-4e80-afc6-3915d3f2b745/assets/Vonovia-SPO-final-22.02.22-1.pdf

https://ir-api.eqs.com/media/document/0bd674bf-c222-40d9-9561-c2527bb2810f/assets/Sustainable_Finance_Framework_022022.pdf

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Absolute target
Intensity target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Is this a science-based target?
Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

Target ambition
1.5°C aligned

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Base year
2021

Base year Scope 1 emissions covered by target (metric tons CO2e)
578290

Base year Scope 2 emissions covered by target (metric tons CO2e)
316724

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
895015

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
92

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
80

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
88

Target year
2045

Targeted reduction from base year (%)
86

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
502760

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
302047

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
804807

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
Revised

Please explain target coverage and identify any exclusions
The target applies to Portfolio Germany. For this reason, we use it to cover all our Scope 1+2 emissions (location-based), which are relevant for the Portfolio Germany. Due to the merger with Deutsche Wohnen, which led to a relevant increase in our emissions, we adjusted the target including the base year to also take into account the emissions caused by Deutsche Wohnen.

Plan for achieving target, and progress made to the end of the reporting year
To achieve our goal, we are actively working on a comprehensive improvement in the energy efficiency of the building stock through energy modernization and an increased share of renewable energies in our neighborhoods - but we also rely on a far-reaching transformation of the energy sector.
Energy-efficient refurbishments are a key element of our climate path. A specially developed decarbonization tool makes it possible to break down the Group target at the level of regions and neighborhoods – and identify nuanced solutions.
Although the target has not been verified by the Science Based Targets Initiative, it has nevertheless been determined using scientifically grounded climate path calculations. For this purpose, Vonovia uses CRREM's (Carbon Risk Real Estate Monitor) climate paths for residential buildings, which specify very precise reduction paths for specific building classes. We also work with right.based on science and use their XDC model to forecast the climate impact of our measures. Right.based on science confirmed that our climate path is aligned with a global warming of 1.4°C.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Is this a science-based target?
No, but we are reporting another target that is science-based

Target ambition
<Not Applicable>

Year target was set
2021

Target coverage
Country/area/region

Scope(s)
Scope 1
Scope 2
Scope 3

Scope 2 accounting method
Location-based

Scope 3 category(ies)
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 13: Downstream leased assets

Intensity metric
Metric tons CO2e per square meter

Base year
2021

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
0.018

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

0.0098

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
0.0067

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
0.0006

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)
0.0073

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.0351

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
92

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
80

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure
82

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure
8

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure
90

% of total base year emissions in all selected Scopes covered by this intensity figure
88

Target year
2030

Targeted reduction from base year (%)
29

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

% change anticipated in absolute Scope 1+2 emissions
29

% change anticipated in absolute Scope 3 emissions
29

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
0.0163

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
0.0098

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
0.0064

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)

<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
0.0006

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)
0.0069

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.033

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
Revised

Please explain target coverage and identify any exclusions
We believe that achieving the goals set out in the Paris Agreement is one of the greatest challenges of our time. Vonovia is rising to this challenge and supports both, the global agenda and the German federal government's specific target of making the country's building stock climate neutral by 2045.
In the reporting year, we further developed our climate strategy and confirmed our goal after completion of the merger with Deutsche Wohnen. We have set the target of achieving a virtually climate-neutral building portfolio in Germany by 2045, with carbon intensity of less than 5 kg of CO2 equivalents per m² of rental area. Along the way, we want to reduce our carbon intensity to less than 25 kg CO2e/m² by 2030. This target (Int 1) is an intermediate target in order to follow the climate path for the German portfolio: virtually climate-neutral building portfolio by 2045.
The focus of the target is the existing property Portfolio in Germany. Therefore, this includes about 88 % of the total emissions for the portfolio in Scope 1 and 2.

Plan for achieving target, and progress made to the end of the reporting year
The targets were developed as part of an interdisciplinary collaboration between various functional areas and with the support of the scientific community (Fraunhofer ISE). They are contingent – not only on a comprehensive improvement of the building portfolio's energy efficiency through energy efficiency modernization, and an increased share of renewable energies in our neighborhoods – but also on a profound transformation of the energy sector.
Following the initial definition of the target in 2020, concrete implementation work continued in the reporting year. Energy-efficient refurbishments are a key element of our climate path. A specially developed decarbonization tool makes it possible to break down the Group target at the level of regions and neighborhoods – and identify nuanced solutions.
Furthermore, this target has been incorporated into our sustainability performance index (SPI), which affects the remuneration of the Management Board. Carbon intensity is the most significant component of the sustainability performance index in terms of its weighting.
Although the target has not been verified by the Science Based Targets Initiative, it has nevertheless been determined using scientifically grounded climate path calculations. For this purpose, Vonovia uses CRREM's (Carbon Risk Real Estate Monitor) climate paths for residential buildings, which specify very precise reduction paths for specific building classes. We also work with right.based on science and use their XDC model to forecast the climate impact of our measures. Right.based on science confirmed that our climate path is aligned with a global warming of 1.4°C.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Int 2

Is this a science-based target?
No, but we are reporting another target that is science-based

Target ambition
<Not Applicable>

Year target was set
2021

Target coverage
Country/area/region

Scope(s)
Scope 1
Scope 2
Scope 3

Scope 2 accounting method
Location-based

Scope 3 category(ies)
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 13: Downstream leased assets

Intensity metric
Metric tons CO2e per square meter

Base year
2021

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
0.018

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
0.0098

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
0.0067

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
0.0006

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)
0.0073

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.0351

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
92

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
80

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure
82

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure

<Not Applicable>

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure
8

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure
92

% of total base year emissions in all selected Scopes covered by this intensity figure
80

Target year
2045

Targeted reduction from base year (%)
86

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

% change anticipated in absolute Scope 1+2 emissions
86

% change anticipated in absolute Scope 3 emissions
86

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
0.0163

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
0.0098

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
0.0064

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
0.0006

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)
0.0069

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.033

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
Revised

Please explain target coverage and identify any exclusions
We believe that achieving the goals set out in the Paris Agreement is one of the greatest challenges of our time. Vonovia is rising to this challenge and supports both the global agenda and the German federal government's specific target of making the country's building stock climate neutral by 2045.
In the reporting year, we further developed our climate strategy and confirmed our goal after completion of the merger with Deutsche Wohnen. We have set the target of achieving a virtually climate-neutral building portfolio in Germany by 2045, with carbon intensity of less than 5 kg of CO2 equivalents per m² of rental area. Along the way, we want to reduce our carbon intensity to less than 25 kg CO2e/m² by 2030.
The focus of the target is the existing property Portfolio in Germany. Therefore, this includes about 88 % of the total emissions for the portfolio in Scope 1 and 2.

Plan for achieving target, and progress made to the end of the reporting year
The targets were developed as part of an interdisciplinary collaboration between various functional areas and with the support of the scientific community (Fraunhofer ISE). They are contingent – not only on a comprehensive improvement of the building portfolio's energy efficiency through energy efficiency modernization , and an increased share of renewable energies in our neighborhoods – but also on a profound transformation of the energy sector.
Following the initial definition of the target in 2020, concrete implementation work continued in the reporting year. Energy-efficient refurbishments are a key element of our climate path. A specially developed decarbonization tool makes it possible to break down the Group target at the level of regions and neighbourhoods – and identify nuanced solutions.
Furthermore, this target has been incorporated into our sustainability performance index (SPI), which affects the remuneration of the Management Board. Carbon intensity is the most significant component of the sustainability performance index in terms of its weighting.
Although the target has not been verified by the Science Based Targets Initiative, it has nevertheless been determined using scientifically grounded climate path calculations. For this purpose, Vonovia uses CRREM's (Carbon Risk Real Estate Monitor) climate paths for residential buildings, which specify very precise reduction paths. for specific building classes. We also work with right.based on science and use their XDC model to forecast the climate impact of our measures. Right.based on science confirmed that our climate path is aligned with a global warming of 1.4°C.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2022

Target coverage
Company-wide

Target type: energy carrier
Other, please specify (Increase additional installed output of photovoltaic per year & to achieve an installed output of around 280 MWp (280,000 MWh) by 2030 (compared to 19.3 MWp in 2021) for equiping approximately17,000 roofs with PV modules to produce 280,000 MWh/year)

Target type: activity
Production

Target type: energy source
Renewable energy source(s) only

Base year
2021

Consumption or production of selected energy carrier in base year (MWh)
19300

% share of low-carbon or renewable energy in base year
6

Target year
2030

% share of low-carbon or renewable energy in target year
100

% share of low-carbon or renewable energy in reporting year
7

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
Underway

Is this target part of an emissions target?
Yes, it is part of our overarching strategy to produce more energy on a local level close to where the energy is used. Due to current regulations we are not able to consume the produced electricity on site, but we need to feed it to the grid. In the long-term, we seek to be able to use all the electricity locally.

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions
Vonovia launched a long-term program to expand photovoltaic capacity in 2021. In the reporting year, Vonovia owned 533 photovoltaic systems with an installed output of 19.3 MWp. Overall potential has increased as a result of the merger with Deutsche Wohnen. Our new aim is to continuously increase the additional installed output per year and to achieve an installed output of around 280 MWp by 2030 (compared to 19.3 MWp in 2021). The 280,000 MWh is therefore our target value (100%) for 2030.
The focus is on Germany, although we have also installed PV systems in Austria and Sweden.

Plan for achieving target, and progress made to the end of the reporting year
Expanding use of photovoltaic systems is one of the measures that we are using to achieve our emission reduction target. In order to achieve the targets for PV output, we are also investing in in-house installation capacities and creating about 100 new jobs in total. In 2023, installed output is set to more than double to around 43 MWp. In the long term, we intend to fit all suitable roof spaces in the German portfolio with PV panels by 2050.

List the actions which contributed most to achieving this target
<Not Applicable>

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	4	829940
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Low-carbon energy generation	Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)
10551

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
886000

Investment required (unit currency – as specified in C0.4)
475900000

Payback period
11-15 years

Estimated lifetime of the initiative
21-30 years

Comment
Vonovia focuses on renewable energies such as photovoltaics. Our new target is to steadily increase the additional capacity installed per year and reach an installed capacity of around 280 MWp by 2030 (compared to 19.3 MWp in 2022). On the way to a virtually climate-neutral building stock, all of the company's suitable roofs are to be fitted with photovoltaic systems by 2050. The estimated duration of this initiative covers the period from 2021 to 2050.

Initiative category & Initiative type

Energy efficiency in buildings	Insulation

Estimated annual CO2e savings (metric tonnes CO2e)
6000

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period
Please select

Estimated lifetime of the initiative
Please select

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Other, please specify (Low-carbon energy generation)

Estimated annual CO2e savings (metric tonnes CO2e)
2000

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period
Please select

Estimated lifetime of the initiative
Please select

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Other, please specify (Smart control system)

Estimated annual CO2e savings (metric tonnes CO2e)
2000

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period
Please select

Estimated lifetime of the initiative
Please select

Comment

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	The focus of our modernization measures for building shells has been laid on facade insulation, window replacements as well as roof and basement ceiling insulation in 2022. We comply completely with the legal requirements of the German Energy Saving Ordinance (EnEV). The German Reconstruction Loan Corporation (KfW) is subsidizing a major portion of the modernization measures. The KfW standard required to obtain a subsidy actually exceeds the EnEV efficiency requirements. We value having access to a broad mix of financing instruments so that we can choose the right product at the right time, e.g., bonds, promissory notes, secured real estate loans, commercial papers, working capital facilities and subsidy loans from KfW and EIB. In November 2022, the EIB granted Vonovia an unsecured loan of € 600 million to support the company's multi-year energy-efficient building modernization program. The German Reconstruction Loan Corporation (KfW) is subsidizing a major portion of the modernization measures. The KfW standard required to obtain a subsidy actually exceeds the EnEV efficiency requirements. Sustainable bonds play a particularly important role in our financing strategy. After issuing our first green bond in 2021, all seven bonds placed in 2022, which accounted for a total sum of four billion euros and 1.25 billion Swedish kronor, were designed to be sustainable. These included three green bonds and four social bonds. Through these bonds, we are catering to capital market demand in a targeted manner, as demonstrated by the order books, which have been oversubscribed on multiple occasions.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon
Other, please specify (EU EPC (Energy Performance Certificate))

Type of product(s) or service(s)

Buildings construction and renovation	Building orientation: Thermal performance

Description of product(s) or service(s)
As part of the energy-efficient modernization measures in the “Upgrade Buildings” program, we install heat-insulated facades, basement ceilings and attics. The catalogue of measures also included the optimization and renewal of heating systems. With the 2022 heating system modernization program, heating systems were replaced in 2,100 units. This has allowed us to reduce CO2 emissions for our tenants by around 11,412 t CO2.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
Yes

Methodology used to calculate avoided emissions
Other, please specify (We calculate the emissions by using emission factors from GEMIS, DEFRA, Environmental departments Germany and Austria as well as Covenant of Mayors for Climate and Energy and Swedenergy)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Use stage

Functional unit used
tCO2e per m2

Reference product/service or baseline scenario used
We compare buildings included in our modernization program to buildings that have not been modernized yet and therefore have a lower energy performance level (Effizienzklasse) of G and H.

Life cycle stage(s) covered for the reference product/service or baseline scenario
Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions
The calculation is based on the saving of emissions due to the heating program and modernization in 2022. Emissions are calculated using relevant emission factors as described under methodology. The revenue cannot be quantified, since revenue from modernised buildings is not accounted for separately.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?
No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?
Yes, a merger

Name of organization(s) acquired, divested from, or merged with
Merger with Deutsche Wohnen SE

Details of structural change(s), including completion dates
In October 2021, the company succeeded in merging with Deutsche Wohnen SE.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	The change in methodology is the result of the inclusion of Deutsche Wohnen as well as a change of emission factors for district heating.

C5.1c

(C5.1c) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 1 Scope 2, location-based Scope 2, market-based Scope 3	The recalculation of our base year is the result of the merger with Deutsche Wohnen SE. We consider this to be a relevant influence, as our emissions increased by 27 % due to this merger. The base year adjustment was also reflected in our climate targets.	Yes

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
625912

Comment
We have developed a climate action plan with the scientific support of the Fraunhofer Institute ISE to evaluate the effectiveness of our measures. This plan reflects our own targets, the average trend in the industry and the federal government's 2045 targets. Due to the Merger with Deutsche Wohnen in 2021, for all these scenarios, we redefined 2021 as our base year.

Scope 2 (location-based)

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
496547

Comment
We have developed a climate action plan with the scientific support of the Fraunhofer Institute ISE to evaluate the effectiveness of our measures. This plan reflects our own targets, the average trend in the industry and the federal government's targets 2045 targets. Due to the Merger with Deutsche Wohnen in 2021, for all these scenarios, we redefined 2021 as our base year.

Scope 2 (market-based)

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
394819

Comment
We have developed a climate action plan with the scientific support of the Fraunhofer Institute ISE to evaluate the effectiveness of our measures. This plan reflects our own targets, the average trend in the industry and the federal government's targets 2045 targets. Due to the Merger with Deutsche Wohnen in 2021, for all these scenarios, we redefined 2021 as our base year.

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
61729

Comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
230029

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
866

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
20480

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

EPRA (European Public Real Estate Association) Sustainability Best Practice recommendations Guidelines, 2017

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

547110

Start date

January 1 2022

End date

December 31 2022

Comment

Including Deutsche Wohnen.

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

605055

Start date

January 1 2021

End date

December 31 2021

Comment

Including Deutsche Wohnen.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
362328

Scope 2, market-based (if applicable)
355132

Start date
January 1 2022

End date
December 31 2022

Comment
Including Deutsche Wohnen.

Past year 1

Scope 2, location-based
488336

Scope 2, market-based (if applicable)
386608

Start date
January 1 2021

End date
December 31 2021

Comment
Including Deutsche Wohnen.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?
Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source of excluded emissions
Segment Nursing Care

Scope(s) or Scope 3 category(ies)
Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Relevance of Scope 1 emissions from this source
Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of Scope 3 emissions from this source
<Not Applicable>

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
0.8

Estimated percentage of total Scope 3 emissions this excluded source represents
<Not Applicable>

Explain why this source is excluded
The source was excluded from the emissions accounting, since it makes up less than 5% of the total emissions and has therefore been identified as not significant. This approach is in line with the recommendations of the GHG Protocol and SBTi. Furthermore, the Care segment is a separate asset class from the traditional business activities of Vonovia.

Explain how you estimated the percentage of emissions this excluded source represents
The emissions of the Care business have been calculated and amount to approx. 7,600t CO_2e (Scope 1+2). Putting this in relation to Vonovia's total Scope 1+2 emissions of 909,438 CO_2e (portfolio and business operations), this results in 0.84%. Accordingly, this share can be assessed as negligible.

Source of excluded emissions
SYNVIA

Scope(s) or Scope 3 category(ies)
Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Relevance of Scope 1 emissions from this source
Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of Scope 3 emissions from this source
<Not Applicable>

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
0.5

Estimated percentage of total Scope 3 emissions this excluded source represents
<Not Applicable>

Explain why this source is excluded
The source was excluded from the emissions accounting, since it makes up less than 5% of the total emissions and has therefore been identified as not significant. Synvia is a media subcompany of Deutsche Wohnen SE with only 54 employees. This approach is in line with the recommendations of the GHG Protocol and SBTi.

Explain how you estimated the percentage of emissions this excluded source represents
The estimate of emissions is based on the number of FTEs. For Vonovia's business operations, 29,068 t CO_2e (Scope 1+2) have been disclosed in public reporting. Per employee (12,063) it is 2.41 tCO2e. On this basis, Synvia would have a comparatively small share with regard to the total Scope 1+2 emissions (< 1%), considering the following underlying calculation: 54 employees x 2.41 tCO2e = 130t. Accordingly, this share can be assessed as negligible.

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
125354

Emissions calculation methodology
Average product method
Asset-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
GHG emission from purchased goods and services refer to the emissions from materials used in new construction. Emissions were calculated using Life-cycle-assessments of six different construction types for a representative building. Emissions accounted for are from modules A1-A3 and normalized to gross floor area. All completed buildings were allocated to the construction types and floor area was multiplied with the respective emission factors. Separate factors were used to calculate emission for underground parking spaces.

Capital goods

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Emissions in category 3.1 include to some part capital goods, no separate calculation performed.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
223795

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
GHG emissions contain GHG emissions for electricity and district heating provided for Vonovia's tenants. Calculation is based on quantity of energy purchased and GHG emission factors from suppliers (for electricity about 70 %), residual factors (for electricity about 30 %) and emission factors from GEMIS (district heating). This category also includes indirect GHG emissions from natural gas, gasoline, and heating oil for rental units as well as Vonovia's business operations. Calculation is based on activity data from invoices and emission factors from GEMIS database.

Upstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
All upstream transportation and distribution emissions within the manufacturing process of the materials used for modernization and new construction are accounted for in category 3.1. Emission from transportation to a construction site are neglectable in the building sector compared to overall emissions. Most of the materials with the most weight are produced nearby and transported only small distances because of cost reasons.

Waste generated in operations

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
The environmental key figures underwent comprehensive restructuring in 2018. An environment controlling team was established in the Controlling department, which resulted in quality improvements in both, content definition and data management. The calculation process was supported by an external third-party, which also led to a new evaluation of the relevance of Scope 3 emissions, while emissions that were previously reported in Scope 3 are now reported in Scope 1 or 2. This led to new calculation methods being applied to some environmental key figures, new calculations being performed, and other emissions not being calculated anymore due to their low relevance. Previously, this information was calculated and it only accounted for 8 t CO2e (2017) and was therefore considered to be not relevant.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
866

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Emissions are provided by suppliers. Flights are calculated according to DEFRA (UK) including RFI. Emissions linked to Vonovia's car fleet are calculated on basis of fuel cards. Data were provided by Vonovia's travel agency for flights and by Deutsche Bahn AG for trips by train. Concerning the life cycle stages, Tank-To-Wheel (TTW) was taken into account for the emissions calculation.

Employee commuting

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
In Germany, data protection is a very sensitive issue. The investigation would only be possible by questioning our staff, which is legally critical. More than half of the 11,153 German employees use company cars to get to work. The remaining half work either in urban centres or are directly at the objects on site with correspondingly short distances. In some cases, our employees do not have a fixed location and therefore have regularly changing access routes. We therefore assume that emissions are low and that a survey is not justified. During our assurance process for our 2022 data, the scope 3 emission categories were also evaluated and the relevance was confirmed.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Vonovia has no significant activity relating to this category.

Downstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
As a provider of housing, downstream transport is not relevant to our business model and does not occur. All relevant transport is done by our own fleet. During our assurance process for our 2022 data the scope 3 emission categories were also evaluated and the relevance was confirmed.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Vonovia is a service provider and does not sell any semi-manufactured products. During our assurance process for our 2022 data the scope 3 emission categories were also evaluated and the relevance was confirmed.

Use of sold products

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Vonovia sells Buildings and apartments, which in their lifetime cause certain amounts of GHG emissions. Currently, we are not calculating and disclosing this data, but we plan to do so in the future.

End of life treatment of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Vonovia does not offer any products that need to be disposed of. Buildings and apartments which are sold have an almost unlimited lifetime. If they in parts will be disposed of in the future, there are no reliable metrics to calculate potential GHG emissions. During our assurance process for our 2022 data, the scope 3 emission categories were also evaluated and the relevance was confirmed.

Downstream leased assets

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
26915

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
GHG emissions from downstream-leased assets are use phase emssions from assets where Vonovia only owns less than 50% of the asset (Wohnungseigentumsgemeinschaften). GHG emissions are calculated based on invoices for natural gas and heating oil. Direct GHG emissions are calculated based on emission factors from GEMIS. For natural gas and heating oil emission factors from GEMIS provide a sufficient quality.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Vonovia does not operate any franchises. During our assurance process for our 2022 data the scope 3 emission categories were also evaluated and the relevance was confirmed.

Investments

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Vonovia only has neglectable shares in relevant companies.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
There is no other upstream emissions.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
There is no other downstream emissions.

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date
January 1 2021

End date
December 31 2021

Scope 3: Purchased goods and services (metric tons CO2e)
61729

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
230029

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)
709

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)
31352

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

C-CN6.6/C-RE6.6

(C-CN6.6/C-RE6.6) Does your organization assess the life cycle emissions of new construction or major renovation projects?

	Assessment of life cycle emissions	Comment
Row 1	Yes, quantitative assessment	For our projects, we perform a simplified LCA according to the BUWOG reference house procedure. Here, the embodied carbon emissions and the primary energy demand for new construction and operation are calculated in a simplified way. The basis is DIN 15978 as well as the energy certificate.

C-CN6.6a/C-RE6.6a

(C-CN6.6a/C-RE6.6a) Provide details of how your organization assesses the life cycle emissions of new construction or major renovation projects.

	Projects assessed	Earliest project phase that most commonly includes an assessment	Life cycle stage(s) most commonly covered	Methodologies/standards/tools applied	Comment
Row 1	New construction and major renovation projects meeting certain criteria (please specify)	Design phase	Cradle-to-grave	Other, please specify (Reference house method based on DIN15978)	An LCA is calculated for new buildings without restrictions. In the case of energy-efficient refurbishment of existing quarters, the LCA is only calculated, if new buildings are added in the same project.

C-CN6.6b/C-RE6.6b

(C-CN6.6b/C-RE6.6b) Can you provide embodied carbon emissions data for any of your organization's new construction or major renovation projects completed in the last three years?

	Ability to disclose embodied carbon emissions	Comment
Row 1	Yes	BUWOG has developed a simplified procedure for determining embodied carbon according to the reference house method. The calculation tool will be used to determine the amount of embodied CO2 for all new construction projects in the future. For the years 2021 and 2022, the sums of embodied CO2 were calculated and published.

C-CN6.6c/C-RE6.6c

(C-CN6.6c/C-RE6.6c) Provide details of the embodied carbon emissions of new construction or major renovation projects completed in the last three years.

Year of completion
2021

Property sector
Residential

Type of project
New construction

Project name/ID (optional)
All new Constructions of VONOVIA group within FY 2021

Life cycle stage(s) covered
Cradle-to-practical completion/handover

Normalization factor (denominator)
IPMS 1

Denominator unit
square meter

Embodied carbon (kg/CO2e per the denominator unit)
279

% of new construction/major renovation projects in the last three years covered by this metric (by floor area)
100

Methodologies/standards/tools applied
Other, please specify (EN15978 and heat)

Comment
The LCA is calculated per m² GFA according to DIN 277 and as a total sum per project. The coverage refers to all new buildings in the corresponding year.

Year of completion
2022

Property sector
Residential

Type of project
New construction

Project name/ID (optional)
All new Constructions of VONOVIA group within FY 2022

Life cycle stage(s) covered
Cradle-to-practical completion/handover

Normalization factor (denominator)
IPMS 1

Denominator unit
square meter

Embodied carbon (kg/CO2e per the denominator unit)
303

% of new construction/major renovation projects in the last three years covered by this metric (by floor area)
100

Methodologies/standards/tools applied
Other, please specify (EN 15978 and heat requirement calculation (Wärmebedarfsberechnung) according to ENEV (Energieeinsparverordnung))

Comment
The LCA is calculated per m² GFA according to DIN 277 and as a total sum per project. The coverage refers to all new buildings in the corresponding year.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.00018

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
902242

Metric denominator
unit total revenue

Metric denominator: Unit total
5151800000

Scope 2 figure used
Market-based

% change from previous year
27.2

Direction of change
Decreased

Reason(s) for change
Change in renewable energy consumption
Other emissions reduction activities
Mergers

Please explain
Although emissions have fallen in relative terms as a result of reduction measures, such as change in renewable energy consumption, they have risen by 3% year-on-year due to the merger with Deutsche Wohnen, while revenue has risen by 42%. Further reductions result e.g. in change of emission factors.

Intensity figure
0.0255

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
909438

Metric denominator
square meter

Metric denominator: Unit total
35712539

Scope 2 figure used
Location-based

% change from previous year
17.85

Direction of change
Decreased

Reason(s) for change
Change in renewable energy consumption
Other emissions reduction activities
Mergers

Please explain
Although emissions have fallen in relative terms as a result of reduction measures such as change in renewable energy consumption, they have risen by 7% year-on-year due to the merger with Deutsche Wohnen, while square meter has risen by 18%.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
No

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Germany	523096
Austria	23595
Sweden	418

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Business operations	20857
Portfolio	526253

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Germany	310126	303062
Austria	21982	21867
Sweden	30219	30203

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Business operations	8211	1015
Portfolio	354117	354117

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Not relevant as we do not have any subsidiaries

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	11800	Decreased	1.2	Gross Scope 1 + 2 emissions decreased by 1.2% due to the switch of renewable energy consumption for Deutsche Wohnen general electricity. Through these activities we reduced our emissions by 11,800 tons CO2e, and our total Scope 1+2 emissions in the previous year (including Deutsche Wohnen) was 1,020,732 tons CO2e, therefore we arrived at –1.2 through (11,800/1,020,732)*100=1.2
Other emissions reduction activities	7300	Decreased	0.837	Gross Scope 1 + 2 emissions decreased by 0.84% due to emission reduction initiatives such as the heating program as well as modernization programs. Through these activities we reduced our emissions by 7,300 tons CO2e, and our total Scope 1+2 emissions in the previous year was 872,021 tons CO2e, therefore we arrived at –0.837 through (7,300/872,021)*100=0.837
Divestment	22000	Decreased	2.523	Gross Scope 1 + 2 emissions decreased by 2.53% due to the reduction of energy consumption of about 1,350 sold buildings based on energy certificates (without consideration of adapted emissions factors). Through these activities, our emissions decreased by 22,000 tons CO2e, and our total Scope 1+2 emissions in the previous year was 872,021 tons CO2e, therefore we arrived at –2.523 through (22,000/872,021)*100=2.523
Acquisitions		<Not Applicable>		
Mergers	237000	Increased	27.178	Gross Sope 1 + 2 emissions increased by 27.18% due to the merger with Deutsche Wohnen. Through the merger, our emissions increased by 237,000 tons CO2e, and our total Scope 1+2 emissions in the previous year was 872,021 tons CO2e, therefore we arrived at 27.178 through (237,000/872,021)*100=27.178
Change in output	900	Increased	0.103	Gross Scope 1 + 2 emissions increased by 0.1% due to the construction of new buildings. Through these construction activities, our emissions increased by 900 tons CO2e , and our total Scope 1+2 emissions in the previous year was 872,021 tons CO2e, therefore we arrived at 0.103 through (900/872,021)*100=0.103
Change in methodology	104000	Decreased	11.926	Gross Scope 1 + 2 emissions decreased by 11.93 % due to the change from energy-related Factor for district heating (254g/kWh – GEMIS 5.0 Fernwärme-Heizung-DE-2015/en) to the emission factor calculated by the allocation method by Carnot (158g/kWh – GEMIS 5.0 Fernwärme-Heizung-DE-2015/car reduced by 40g/kWh for Scope 3.3). Through these changes in methodology, our emissions decreased by 104,000 tons CO2e and our total Scope 1+2 emissions in the previous years was 872,021 tons CO2e, therefore we arrived at 11.926 through (104,000/872,021)*100=11.926
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other	31000	Decreased	3.555	Gross Scope 1 + 2 emissions decreased by 3.56 % due to the update/correction of expired and incorrect energy certificates. Through this activity, our emissions decreased by 3,555 tons CO2e and our total Scope 1+2 emissions in the previous years was 872,021 tons CO2e, therefore we arrived at 11.926 through (31,000/872,021)*100=3.555

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 15% but less than or equal to 20%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	17269	2755648	2772917
Consumption of purchased or acquired electricity	<Not Applicable>	131909	33510	165419
Consumption of purchased or acquired heat	<Not Applicable>	466519	2169559	2636078
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	64	<Not Applicable>	64
Total energy consumption	<Not Applicable>	615762	4958716	5574478

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other biomass

Heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value
LHV

Total fuel MWh consumed by the organization
17269

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Coal

Heating value
LHV

Total fuel MWh consumed by the organization
14737

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Oil

Heating value
LHV

Total fuel MWh consumed by the organization
148415

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
2515409

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
LHV

Total fuel MWh consumed by the organization
77087

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
2772917

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	16108	64	16108	64
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Country/area of low-carbon energy consumption
Austria

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier
Electricity

Low-carbon technology type
Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
430

Tracking instrument used
Contract

Country/area of origin (generation) of the low-carbon energy or energy attribute
Austria

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment
For the Austria region since 2021, all volumes for business processes origin 100% green electricity.

Country/area of low-carbon energy consumption
Germany

Sourcing method
Heat/steam/cooling supply agreement

Energy carrier
Heat

Low-carbon technology type
Other biomass

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
6235

Tracking instrument used
No instrument used

Country/area of origin (generation) of the low-carbon energy or energy attribute
Germany

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment
423 buildings are served with climate-neutral methane gas caused by coal mining thats collected and used for heating. CO2 is much less harming for the environment than methane.

Country/area of low-carbon energy consumption
Germany

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
73623

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
Spain

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2022

Comment
For the Germany region since 2020, all volumes traded via VESG by means of guarantee of origin 100% green electricity, cleared via the Federal Environment Agency's register of guarantees of origin. In 2022, the reported amount also includes consumption of Deutsche Wohnen.

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area
Germany

Consumption of purchased electricity (MWh)
95868

Consumption of self-generated electricity (MWh)
64

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
28687

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]

Country/area
Austria

Consumption of purchased electricity (MWh)
25136

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
24706

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]

Country/area
Sweden

Consumption of purchased electricity (MWh)
2489

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
2391

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

C-CN9.6a/C-RE9.6a

(C-CN9.6a/C-RE9.6a) Provide details of your organization's investments in low-carbon R&D for real estate and construction activities over the last three years.

Technology area
Building integrated photovoltaic systems

Stage of development in the reporting year
Full/commercial-scale demonstration

Average % of total R&D investment over the last 3 years
61

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years
62

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
Another aspect of implementing the climate pathway is increasing energy generation from renewable sources. To achieve this, Vonovia launched a long-term program to expand photovoltaic capacity in 2021. In the reporting year, Vonovia owned 533 photovoltaic systems with an installed output of 19.3 MWp. Overall potential has increased as a result of the merger with Deutsche Wohnen. Our new target is to continuously increase the additional installed output per year and to achieve an installed output of around 280 MWp by 2030 (compared to 19.3 MWp in 2021)

Technology area
Other, please specify (Innovation energy production)

Stage of development in the reporting year
Applied research and development

Average % of total R&D investment over the last 3 years
1.34

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years
2

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
The newly formed energy innovation team, which is part of the Innovation & Business Building department, actively works to ensure that climate pathway targets are met by analyzing and testing innovative technologies. Targeted efforts have already been made to scout out new technologies at all stages of the stringent innovation process, which are then assessed for technical feasibility and economic viability with the involvement of relevant stakeholders. Particular focus is given to the testing of innovative generation and storage solutions in the context of decentralized energy supplies. In the area of energy generation innovation, we are currently testing energy generation by means of wind turbines in our quarters or piloting the use of Hydrogen as storage, thereby contributing to increasing the share of renewable energy in achieving our climate target. Another project in this area is the digital energy twin for optimal forecasting of energy requirements and consumption in an energy management system.

C-RE9.9

(C-RE9.9) Does your organization manage net zero carbon buildings?
No, but we plan to in the future

C-CN9.10/C-RE9.10

(C-CN9.10/C-RE9.10) Did your organization complete new construction or major renovations projects designed as net zero carbon in the last three years?
No, but we plan to in the future

C-CN9.11/C-RE9.11

(C-CN9.11/C-RE9.11) Explain your organization's plan to manage, develop or construct net zero carbon buildings, or explain why you do not plan to do so.

We have clear, Group-wide targets for energy consumption and efficiency standards for all construction and modernization projects. Our Carbon Risk Real Estate Monitor (CRREM) decarbonization pathway is oriented towards the Paris 1.5° target and is based on a scientifically verified calculation by XDC, which depicts Vonovia's pathway compatible with global warming of 1.4° Celsius. This 1.5°-aligned climate path for multifamily residences in Germany (as of 07/2021) has been established as a sector benchmark. Accordingly, the most important key figures in this respect are the average primary energy consumption per square meter as well as the CO2 intensity of our existing portfolio in Germany. It also feeds into our Sustainability Performance Index (SPI), which is our most important non-financial performance indicator. Compliance with the defined targets is an important part of the Executive Board's decision-making process for new construction projects.

We align our construction projects to EPC Class A/A+ (in final energy demand) or KfW standards, such as the KfW55 standard. New construction projects are compliant with the EU Taxonomy Regulation. For every new construction and modernization project, we check whether PV electricity, other renewable energy sources (e.g. green district heating, pellet heating, heat pumps) and electromobility can be used. We also pay attention to resource conservation and environmental protection during construction. We ensure that residential units that have reached the end of their life cycle are dismantled in a resource-conserving manner. Our holistic planning approach also includes a focus on neighbourhood approaches (especially with regard to energy and heat supply), in which we can apply the findings from our research projects. The generation of solar energy that can be used directly in the neighbourhood or building plays an important role here. Electromobility is always considered in this context.

A wide variety of measures also help to significantly improve energy standards in existing buildings - for example, as part of the "Energiesprong" approach.

Our efforts in the field of energy efficiency for buildings become clear when looking at our new construction projects. The majority of our new construction projects have a very high energy efficiency class. Due to the heated debate and lack of a uniform definition and critique of the term net zero building, we would currently like to distance ourselves from passing off individual projects as net zero projects, even though they already meet a very high energy efficiency standard – with more than 98 per cent of our newly constructed buildings in Germany with efficiency class (based on German EPC) A or better. Instead, we are striving to improve the energy efficiency of our buildings to the best possible standard through further measures and the performance of life cycle analyses.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
VONOVIA_SE_Sustainability-Report_2022_Information_and_Key_Figures.pdf

Page/ section reference
p. 41-42

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
VONOVIA_SE_Sustainability-Report_2022_Information_and_Key_Figures.pdf

Page/ section reference
p. 41-42

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Purchased goods and services

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
VONOVIA_SE_Sustainability-Report_2022_Information_and_Key_Figures.pdf

Page/section reference
p. 41-42

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
VONOVIA_SE_Sustainability-Report_2022_Information_and_Key_Figures.pdf

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Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
VONOVIA_SE_Sustainability-Report_2022_Information_and_Key_Figures.pdf

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Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Downstream leased assets

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
VONOVIA_SE_Sustainability-Report_2022_Information_and_Key_Figures.pdf

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Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	ISAE3000	Same standard for all environmental data verification VONOVIA_SE_Sustainability-Report_2022_Information_and_Key_Figures.pdf
C8. Energy	Alignment with a sustainable finance taxonomy	ISAE3000	p.31 et seqq. Vonovia-SE_Annual-Report_2022-Information.pdf
C9. Additional metrics	Waste data	ISAE3000	Same standard for all environmental data verification VONOVIA_SE_Sustainability-Report_2022_Information_and_Key_Figures.pdf

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.
Other carbon tax, please specify (Current legislation in Germany includes a carbon price for fossil fuels used for heating, such as natural gas, oil and coal (Fuel Emissions Trading Act BEHG). The carbon price for these Scope-1 emissions applied for the first time in 2021.)

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Other carbon tax, please specify

Period start date
January 1 2022

Period end date
December 31 2022

% of total Scope 1 emissions covered by tax
100

Total cost of tax paid
0

Comment
The CO2 tax applied for the first time in 2021. The price for the year 2022 was 30 euros per metric ton of CO2. However, since the tax is currently still fully apportionable, the tenant bears the price, not the landlord. Therefore, no costs were incurred in 2022. Until 2022, the law states that tenants will bear the cost, but the German Cabinet decided that the carbon tax will be split between owners and tenants from 2023 onwards. Depending on CO2 intensity of a building, owners have to bear up to 95% of carbon tax. As 85% of our portfolio is located in Germany the carbon tax has a large direct impact on our business.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

In 2022, CO2 tax only affect us indirectly in operational terms, as, here as well, the energy providers are responsible for paying it to the government and can add the costs to the sales price. Until 2022, the law states that tenants will bear the cost, but the German Cabinet decided that the carbon tax will be split between owners and tenants from 2023 onwards. Depending on CO2 intensity of a building, owners have to bear up to 95% of carbon tax. As 85% of our portfolio is located in Germany, the carbon tax has a large direct impact on our business.

As a first step, the risk has therefore been included and assessed in our risk management. In our risk management, the risk falls into the potential loss range (2) of €25-100 million for the 5-year period (based on Group FFO). We assume a continuous increase in the CO2 levy for our Scope 1 emissions from 25€/tCO2 in 2021 until 65€/tCO2 in 2026 (also after 2026 up to €100/tCO2 in 2027 and a burden sharing between tenants and owners according to the CO2e/m² rental space (starting from 2023). This results in a potential cost for the period 2022 to 2027 in the range of €40-150 million.

As a second step, we are aware of the fact that most of our Scope 1 and 2 emissions are of the properties in our portfolio (97%). The majority of these are in Germany. Therefore, our task is to increase energy efficiency through energy refurbishment of our buildings to limit energy consumption and emissions. In the light of the new Federal Climate Change Act and the sector targets contained therein, we have set the target of achieving a virtually climate-neutral building portfolio by 2045, with carbon intensity of less than 5 kg of CO_2 equivalents per m² of rental area. Vonovia is committed to making its property portfolio virtually climate neutral by 2045. The energy-efficient modernization measures focus on heat insulation for facades, basement ceilings and attics, the replacement of windows and the installation of new heating systems.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price
Implicit price

How the price is determined
Alignment with the price of a carbon tax

Objective(s) for implementing this internal carbon price
Drive low-carbon investment
Navigate GHG regulations
Stress test investments

Scope(s) covered
Scope 1
Scope 2

Pricing approach used – spatial variance
Uniform

Pricing approach used – temporal variance
Evolutionary

Indicate how you expect the price to change over time
At the beginning of 2021, the German government introduced a carbon price that also applies to the real estate sector: starting at €25 per metric ton of CO2, the cost of heating energy will be priced. The level of the carbon tax will rise steadily until 2025, before a market price is to determine the future level. For 2025, the price is set at €55 per metric ton of CO2.

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)
25

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)
55

Business decision-making processes this internal carbon price is applied to
Value chain engagement

Mandatory enforcement of this internal carbon price within these business decision-making processes
Yes, for all decision-making processes

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan
At the beginning of 2021, the German government introduced a carbon price that also applies to the real estate sector: starting at €25 per metric ton of CO2, the cost of heating energy will be priced. The level of the carbon tax will rise steadily until 2025, before a market price is to determine the future level. For 2025, the price is set at €55 per metric ton of CO2. In 2022, the price per metric ton of CO2 was at €30. The Climate Action Program 2030 will also examine changes to tenancy law enabling the costs of a carbon tax to be passed on to tenants. As at the start of 2021, all of the related costs can be passed on. Until 2022, the law states that tenants will bear the cost, but the German Cabinet decided that the carbon tax will be split between owners and tenants from 2023 onwards. Depending on CO2 intensity of a building, owners have to bear up to 95% of carbon tax. As 85% of our portfolio is located in Germany the carbon tax has a large direct impact on our business. Vonovia therefore calculates conservatively and takes the annual price per ton stipulated by law as its internal price and takes these into account in internal profitability and investment calculations.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers/clients

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Other, please specify (Compliance)

Details of engagement
Other, please specify (Ensuring compliance through business code, terms of conditions and individual agreements; mandatory environmental criteria)

% of suppliers by number
34

% total procurement spend (direct and indirect)
45.3

% of supplier-related Scope 3 emissions as reported in C6.5
0

Rationale for the coverage of your engagement
Vonovia manages its partnerships with external partners and service providers with relevant sales impact through the Business Partner Code, its general terms and conditions of purchasing and individual agreements as part of its structured approach to supplier management. In this way, we ensure compliance with all current European

procurement standards and regulations. We have implemented our business partner code over the last 2.5 years and are aiming to cover every supplier/contractor/service provider through the business partner code. The onboarding and roll out of the code have, so far, focused on the high impact/volume suppliers. Our aim is to cover all our procurement spend through our business partner code in the next year.

In Sweden, we defined environmental criteria that are binding for all new suppliers from 2021 onwards. These criteria will be made obligatory for all other suppliers from 2025 onwards. The Vonovia partner portal plays a vital role in our sustainable approach to supplier management. Social and environmental standards are integrated into the processes we use to select and approve suppliers. We require our partners to observe and apply our product manual in order to promote the procurement of sustainable materials. We also communicate with them regularly about ecologically friendly construction materials.

Impact of engagement, including measures of success
The central procurement department manages compliance with labor, social and environmental/quality standards in the supply chain as part of the process of supplier selection and supplier management. It focuses on (1) Continuous revision and compliance with the Business Partner Code to ensure compliance with labor and social standards, (2) development of the Vonovia partner portal (measures: commissioning and continued development of the Vonovia partner portal for service providers and suppliers as a key component of system-supported risk and supplier management; structured onboarding using a two-stage registration process; traffic light model to ensure transparency regarding the validity of all relevant documents and, as a result, central documentation of key documents, including the minimum wage declaration, the exemption certificate and all other trade-specific approvals; system-supported supplier assessment based on a questionnaire).

Avoidance of climate risks is part of the business partner code. Partners are encouraged to be climate-conscious and to use raw materials that are as climate-friendly as possible. In the event of any irregularities or scenarios in which these obligations are ignored, the cases are documented accordingly and sanctions are normally imposed. These processes use tools, such as the blacklist and contract award and payment blocks in SAP.

We have implemented our business partner code over the last 2.5 years and are aiming to cover every supplier/contractor/service provider through the business partner code. The onboarding and roll out of the code has so far focused on the high impact/volume suppliers. Our aim is to cover all our procurement spend through our business partner code in the next year.

Comment
n/a

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number
0.5

% total procurement spend (direct and indirect)
1

% of supplier-related Scope 3 emissions as reported in C6.5
0

Rationale for the coverage of your engagement
In 2022, resource-saving and eco-friendly construction and analysis of the entire life cycle came more to the fore at Vonovia. As part of our “Perspectives on the Future of Construction” dialog process, we discussed the necessary framework conditions for climate-neutral construction with representatives of the scientific community, building materials manufacturers, planners and the construction industry. This also included participants from our suppliers, possible new suppliers and other partners in our value chain.

Impact of engagement, including measures of success
The impacts and focus of the dialogue forum were diverse: On the one hand, the event offered a platform for our value chain to connect and discuss on topics around resource-saving and eco-friendly construction. Knowledge sharing enables us as an industry to improve on sustainability and climate-related issues. Vonovia has started the dialogue with existing and potential suppliers to support new ideas and innovation in the field of building materials and products. Vonovia seeks to understand sustainable trends and opportunities the market is working on and encourages business partners to work on mutual strategies.

This also included a presentation of Vonovia’s research in cooperation with Frauenhofer ISE. In recent months, Vonovia has developed approaches to solutions for a climate-friendly construction industry with the support of Fraunhofer. The results were presented and discussed at the conference.

On the other hand, the forum included the "Supplier Innovation Pitch”. Our suppliers and potential new suppliers were addressed to present new and/or innovative products to a jury of different departments with a commercial and technical background. Three building projects have been awarded according to their innovative and sustainable characteristics. The winning partners are involved in a prestige development site to present their products. Further engagement is considered.

During the dialogue series, Vonovia identified, together with our stakeholders, a variety of topics. This will be the foundation for developing concrete measures to address those topics and foster change within and outside its organization. As a result of the final conference held in November, Vonovia has committed to a series of measures that will be transferred into specific implementation plans in 2023.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing	Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number
100

% of customer - related Scope 3 emissions as reported in C6.5
0

Please explain the rationale for selecting this group of customers and scope of engagement
The highest impact on climate for our clients are mostly related to emissions from energy consumption. The European Union has legally enshrined tenants' freedom of choice of energy supplier, so that it remains out of our scope. Due to the sheer size of our portfolio, with around 490,000 apartments in whole Germany, the main climate-related impact we can realise through motivating our tenants to adapt an energy-efficient behaviour is considerable.

All tenants (100%) are informed about climate-conscious behaviour when signing the contract as well as regularly in our tenants magazine "zuhause" and on our corporate website. The aim is to achieve the greatest possible savings. Tenants have an influence on incidental rental costs and energy consumption in existing buildings.

Additonally, Vonovia offers services to sell green electricity directly to tenants and thus contribute to the wider use of renewable energies: With each new lease, tenants receive an offer to purchase green electricity from a Vonovia subsidiary.

Impact of engagement, including measures of success
Due to the sheer size of our portfolio, with around 490,000 apartments in whole Germany, the main climate-related impact we can realise through motivating our tenants to adapt an energy efficient behaviour is considerable. Thus, all our clients are considered in our engagement activities (target: 100%).

As previously described, Vonovia's direct influence on our tenants' energy consumption is extremely limited. However, in order to explain the significance of saving energy and conserving resources to our tenants, we regularly inform them about energy-saving options through our customer magazine "zuhause", by distributing flyers and via the corporate website. For example, we explain how modern heating systems operate and provide tips on how to use them effectively. Through the annual operating cost statements and - cumulated - in our CO2 balance, we can at least approximately estimate the effect of our measures. In 2022, we achieved a reduction of our emission intensity of rentable area (kg CO_2e/m^2) of around 14% (2021: 38.4 (excl. Deutsche Wohnen), 2022: 33.0). As part of our climate-strategy, our target is to achieve climate-neutral building stock by 2045, which also serves as our measure of success.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?
Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement
Complying with regulatory requirements

Description of this climate related requirement
The prerequisite for our suppliers is a commitment to comply with Vonovia's Business Partner Code. By signing the code, suppliers undertake to protect the environment in the course of their business activities and to comply with the relevant laws, regulations and directives. This applies in particular to the applicable accident prevention regulations (UVV), workplace ordinance (ArbStättV) and the Waste and Recycling Management Act (AbfG/KrWG). In Sweden, we defined environmental criteria that will be binding for all new suppliers and their sub-suppliers from 2021 onwards. These criteria will be made binding for all other suppliers from 2025 onwards. The criteria include (1) internal environmental work, e.g. targets to reduce negative environmental impacts, (2) Material and products, e.g. life cycle assessment of products, (3) substances hazardous to the environment and health (4) Waste, and (5) transport, e.g. emission requirements.

% suppliers by procurement spend that have to comply with this climate-related requirement
80

% suppliers by procurement spend in compliance with this climate-related requirement
41

Mechanisms for monitoring compliance with this climate-related requirement
Supplier self-assessment
Grievance mechanism/Whistleblowing hotline

Response to supplier non-compliance with this climate-related requirement
Exclude

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Yes, we fund organizations or individuals whose activities could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

We are transparent about the positions that we take – with a focus on issues that involve the interplay between housing and the environment. Representatives from the world of business, research and politics took part in our own “Outlook for Climate-neutral Living” forum in 2019 and 2020. See page 2 of the corresponding brochure (attached, German only): “In order to set the right course for this, in November 2019 together with our partners from the German Energy Agency (dena) and the Fraunhofer Gesellschaft, we kicked off the specialist symposium "Outlook for Climate-Neutral Living" and thus initiated a long-term dialog process with numerous stakeholders from the housing and energy industries and housing and energy industries as well as the political arena. We are focusing on partnerships and an integral, cross-sectoral approach. At the same time, however efficiency, security of supply and financial acceptability for tenants must not be disregarded. We involve our tenants in all issues relating to the sustainable supply of our properties."

In 2022, we continued the successful approach of holding our own symposium and dedicated ourselves to the topic of the future viability of construction in another series of events and collaborations.

See also: https://report.vonovia.de/2022/nachhaltigkeitsbericht/en/reducing-co2-in-the-real-estate-portfolio/ and https://report.vonovia.de/2022/nachhaltigkeitsbericht/en/socio-political-dialogue/
Klimabroschuere_VNA_2020_dt.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

We are committed to play a role in political discussions and taking a position on policy issues. We do this transparently and openly. All business meetings with a political dimension are coordinated with Corporate Communications and may only be attended by the individuals defined in the Group guideline. With this we ensure, that lobbying policies are met, and our engagement activities are consistent with our business strategy and conduct – including climate change. At the same time, our public affairs team collaborates closely with other departments, such as sustainability and portfolio management, to ensure compliance. We are also working with numerous associations and initiatives to achieve our climate targets.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association
Other, please specify (ZIA - Zentraler Immobilien Ausschuss)

Is your organization's position on climate change policy consistent with theirs?
Mixed

Has your organization attempted to influence their position in the reporting year?
No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
As the overall association of the German real estate industry, the ZIA represents the interests of a large number of different real estate companies with a wide variety of asset classes. The housing sector plays a major role in this context, especially in the political debate. Like Vonovia, the ZIA is committed to the goal of a climate-neutral building stock (Paris targets) and supports the industry with specialist policy consultations and political work regarding the economic feasibility of (planned) legislative activities. We particularly welcome the bridging to energy policy topics, e.g. to issues around photovoltaics and tenant electricity as well as renewable energies in general. We also share the association's opinion that suitable funding instruments and openness to technology are needed in order to be able to achieve the ambitious ecological goals for the building sector. As the ZIA is broadly based, we are not affected by many of the association's activities and positions - for example, on green leases.

We are a member of all relevant committees of the ZIA, e.g. housing, energy, corporate social responsibility. We position Vonovia within the association through our committee work. We regularly participate in consultations, e.g., on European legislative projects, which ZIA responds to on a consolidated basis and passes on to the relevant decision-makers in Brussels and Berlin.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
75000

Describe the aim of your organization's funding
These are membership fees. As a member, we can network in the real estate industry and participate in various committees and taskforces to drive forward important topics in the real estate industry, such as energy efficiency and limit financial burden for tenants. In the long term, we hope that their representation of our interests will also help us to achieve our own climate protection targets and thus contribute to climate protection.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (German Real-Estate Association (GdW))

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
As the overall association of the German housing industry, GdW represents the interests of a large number of housing companies of different sizes and ownership structures (e.g., cooperatives or municipalities). Despite the resulting different challenges - e.g., with regard to the financing structure of the companies - the ecological orientation of the association coincides 1:1 with that of Vonovia. This is particularly evident in the joint founding of InitiativeWohnen.2050 (IW.2050), an association for the standardization of ecological metrics in the housing industry, and the publication of a working paper by the association on CO2 balancing in the housing sector, which is essentially based on the joint agreements from IW.2050. Both GdW and Vonovia are founding members of IW.2050.

We are also involved in working groups and committees. Together with a working group of the association, we are currently developing the basis for a joint approach to the European Sustainability Reporting Standards. We regularly take part in consultations, e.g. on European legislative projects, which GdW responds to on a consolidated basis and submits to the relevant decision-makers in Brussels and Berlin.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
92000

Describe the aim of your organization's funding
These are membership fees. In order to be able to adequately represent the interests of its member companies, the GdW has joined forces with other institutions and associations from important industries and sectors in various organizations and working groups. In this way, it is possible to work together on a sector-specific basis and exert far-reaching influence on politics and the economy. In the long term, we hope that their representation of our interests will also help us to achieve our own climate protection targets and thus contribute to climate protection.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations or individuals in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization or individual
Non-Governmental Organization (NGO) or charitable organization

State the organization or individual to which you provided funding
Stiftung Klimawirtschaft (German CEO Alliance for Climate and Economy)

Funding figure your organization provided to this organization or individual in the reporting year (currency as selected in C0.4)
50000

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate
Stiftung KlimaWirtschaft — German CEO Alliance for Climate and Economy is a nonprofit foundation whose sole mission is to promote climate protection and the sustainable use of natural resources. As a CEO alliance of more than 30 companies from all sectors of business and industry, they work with government, think tanks and civil society to develop constructive solutions for the transition to a climate-neutral economy. As Foundation 2°, Stiftung Klimawirtschaft has been arguing for ambitious climate targets and ambitious climate policies at the national, European and international level since 2007.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In mainstream reports, incorporating the TCFD recommendations

Status
Complete

Attach the document
VONOVIA SE_Sustainability Report_2022_s.pdf

Page/Section reference
p. 22 et seqq. (targets p.25)
p. 106 et seqq.

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Task Force on Climate-related Financial Disclosures (TCFD) UN Global Compact Other, please specify (IW.2050; klimaaktiv Pakt; Allmännyttans klimatinitiativ)	TCFD: Implementers of the framework UN Global Compact: Signatory IW.2050: Founding member and active driver for more standardization in ecological reporting klimaaktiv Pakt: Member of the ambitious climate protection initiative of the Austrian government. Membership is linked to a commitment to meet ambitious and Paris-compliant climate targets. Applies to our Austrian subsidiary BUWOG Austria Allmännyttans klimatinitiativ: Member of the ambitious climate protection initiative of the Swedish government. Membership is linked to a commitment to meet ambitious and Paris-compliant climate targets. Applies to our Swedish subsidiary Victoriahem

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, executive management-level responsibility	At Vonovia - unlike most other housing companies - numerous elements of the value chain are carried out by our own employees. This also applies to the residential environment - i.e., the management of all the areas that form part of the properties around our buildings. These include around 18 million m² of green areas (lawns, hedges, woody plants) and 211,000 trees. Vonovia Wohnumfeld Service GmbH, which employs around 1,000 people (mainly gardeners and landscapers), looks after these areas and supports the Development division in planning additional open spaces. The managing director of this GmbH is thus responsible for the topic of biodiversity. With our diverse measures in environmental and climate protection, we strengthen the sustainable use of soils and ecosystems. We attach importance to construction methods that conserve resources (e.g. by minimizing soil sealing) as much as possible and use sustainable materials in our new construction projects. In our neighborhoods, as well as at our headquarters and administrative buildings, we implement projects that preserve habitats for animal and plant species (such as nesting boxes for bats or endangered bird species) and promote biodiversity. Vonovia Management Board and the Wohnumfeld Service management entered into an ongoing cooperation with NABU Deutschland e.V. at a national level. As part of this cooperation, various habitats have already been designed and implemented at a wide variety of locations, such as wildflower meadows with nesting aids for wild bees. In addition, with the support of NABU experts, we are developing new habitats for plants and animals that are adapted to changing climatic conditions. In this way, we not only preserve existing habitats, but also increase resilience and biodiversity by integrating new and more species-appropriate, adapted habitats into our areas.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Other, please specify (Minimizing surface sealing; ensuring that all animal and plant species in an area are protected and maintained; securing and protecting existing woodlands)	SDG Other, please specify (Naturschutzbund Deutschland e.V.)

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment
Yes

Value chain stage(s) covered
Direct operations

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
ENCORE tool

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
We implemented a climate risk tool in 2022 to assess physical climate risks according to the RCP scenarios. For the implementation of the new sustainability reporting framework according to the European Sustainability Reporting Standards (ESRS) for fiscal year 2024, we are conducting an Impact Risks Opportunities Assessment (IRO) in 2023, where we also consider the ESRS E4 on biodiversity. As part of this, we use tools such as ENCORE or the WWF Risk Monitor to determine our impacts. For us as a housing company active in the German, Swedish and Austrian markets, terrestrial ecosystem use shows the highest potential impact.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment
Yes

Value chain stage(s) covered
Direct operations

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
ENCORE tool

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
We implemented a climate risk tool in 2022 to assess physical climate risks according to the RCP scenarios. For the implementation of the new sustainability reporting framework according to the European Sustainability Reporting Standards (ESRS) for fiscal year 2024, we are conducting an Impact Risks Opportunities Assessment (IRO) in 2023, where we also consider the ESRS E4 on biodiversity. As part of this, we use tools such as ENCORE or the WWF Risk Monitor to determine our impacts. For us as a housing company active in the German, Swedish and Austrian markets, it is noticeable that there is a potential dependency on surface water.

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?
No

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators Other, please specify (Status-quo indicators)

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Impacts on biodiversity Details on biodiversity indicators Biodiversity strategy Other, please specify (specific initiatives and cooperations)	p. 38 et seqq. p. 111 VONOVIA SE_Sustainability Report_2022_s.pdf
Other, please specify (corporate website)	Content of biodiversity-related policies or commitments Impacts on biodiversity Details on biodiversity indicators Biodiversity strategy Other, please specify (specific initiatives and cooperations)	https://www.vonovia.de/de-de/nachhaltigkeit/klima-und-umweltschutz/biodiversitaet

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chairman of the management board	Chief Executive Officer (CEO)

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms