Uniper SE - Climate Change 2022

C0. Introduction

C0.1

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

Uniper is an international parent-owned energy company with 11494 employees (as of Q4, 2021) and business activities in many countries. The parent company of the Uniper Group is Uniper SE. The majority shareholder of Uniper SE, with an indirect interest of more than 75%, is Fortum Oyj, Espoo, Finland (“Fortum”).

Uniper's corporate portfolio comprises power generation, commodity supply and trading, gas storage and infrastructure, sales and energy services to business customers. Since September 2016, Uniper has been listed on the Frankfurt stock exchange and is represented in the MDAX and MSCI-Germany.

With a total installed electric capacity of 31,6 GW (legally attributable to ownership capacities) Uniper is among the largest global power generators. Uniper's main activities concentrate on the natural gas value chain, with gas-fired power plants, LNG shipping, gas storage facilities and trading operations. Other significant activities are related to hydropower plants, coal plants, nuclear power plant decommissioning and hydrogen infrastructure development. These activities are distributed in three operational segments: European Generation, Russian Power Generation and Global Commodities.

The generation capacity by technology is as follows (December 2021 status, GW, fully consolidated):

Gas: 17.0

Coal & Lignite: 8.6

Hydro: 3.6

Other: 2.8 (reserve assets due to system relevance, mostly foreseen for closure)

Nuclear: 1.4

The assets are geographically distributed as follows (Q4 2021 status, GW):

Germany: 9.9

Russia: 10.8

United Kingdom: 6.4

Sweden: 4.2

Netherlands: 1.6

Hungary: 0.4

Power Generation

The generation business is divided into European Generation and Russian Power Generation (Uniper's activities in the Russian Federation), responding to significant differences in the business contexts and regulatory frames from Europe and the Russian Federation.

European Generation

The European Generation segment comprises the various power and heat generation facilities that the Uniper Group operates in Europe. In addition to fossil-fuel power plants (coal-, gas-, oil-fired power plants; combined gas and steam power plants) and hydroelectric power plants, these generation facilities also include nuclear power plants in Sweden. Most of the energy produced is sold to the Global Commodities segment, which is responsible for the marketing and sale of energy to major customers via the traded markets and its own sales organization. A further portion of the energy generated is marketed by means of long-term electricity and heat supply contracts. In addition to the power plant business, this segment also included the marketing of energy services, which encompass engineering and asset management, as well as operational and maintenance services.

Global Commodities

The Global Commodities segment bundles the energy trading activities and forms the commercial interface between the Uniper Group and the global traded markets for energy and the major customers. Within this segment, the fuels required for power generation (mainly coal and gas) are procured, emission allowances are traded, the electricity produced is marketed, and the portfolio is optimized by the management of the use of the power plants. On the basis of long-term contracts with suppliers within and outside Germany, Uniper sells natural gas to resellers (e.g. municipal utilities), major industrial customers and power plant operators. This segment includes infrastructure investments and gas storage operations.

Russian Power Generation

The Russian Power Generation segment brings together the operating power generation business of the Uniper Group in Russia. PAO Unipro, a subsidiary of Uniper SE listed in Russia, is responsible for conducting all business in connection with power generation and associated activities in Russia. These include the procurement of the fuels needed for the power plants in 5 locations, the operation and management of the plants and the trading and sale of the energy produced.

New Growth Areas: Hydrogen and Renewables Generation

Uniper has already gained long-term experience in operating hydrogen facilities, as it was one of the first energy utilities to produce green hydrogen from electrolysis. The vast pipeline of projects targeting production and importing/trading of low-carbon hydrogen includes ammonia and methanol derivatives, as well as sustainable fuels. Uniper´s hydrogen-related activity includes recent projects such as Bad Lauchstädt Energy Park (funded project as real project for energy transition), import and production of hydrogen at Wilhelmshaven and Project Air in Sweden (in co-operation with Fortum and Perstorp), which targets the production of climate-friendly methanol from green hydrogen. In the area of renewables, Uniper has established a joint organization with Fortum for European onshore wind and solar, which bundles competences in these fields. The renewables business will be functionally managed by Uniper.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

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

Germany
Hungary
Netherlands
Russian Federation
Sweden
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United States of America

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-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation

Distribution

Other divisions

Gas storage, transmission and distribution

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	DE000UNSE018

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(s)	Please explain
Chief Sustainability Officer (CSO)	In order to facilitate cooperation among different Business Units and the Sustainability team, ensure appropriate actions and responses, as well as to monitor emerging trends and communications, the Board of Directors delegated to one of its members, the COO, the responsibility of organizing and preparing of all sustainability-related tasks at group-level. The COO was also named as Chief Sustainability Officer (CSO). In tackling this role as CSO, the Board Member has budget autonomy over sustainability-related activities. The CSO's main task is to direct and integrate sustainability-oriented initiatives into Uniper's overall business, with the aim to protect and support the company's performance and long-term interests, ensuring that material issues related to corporate sustainability are discussed at the highest management level. This not only includes specific climate-related topics linked to regulations, operations or strategy, but in recent years included climate change related challenges. The CSO reports directly to the Supervisory Board on strategic sustainability activities. As Uniper's highest governance board, the Supervisory Board also monitors the Group's fulfilment of its sustainability obligations. Examples: - The TCFD project team met for the first time in 2021 under the direction of COO/CSO. The company began to implement the voluntary disclosure recommendations of the TCFD, which resulted in the publication of the first TCFD report, which is included in the 2021 Annual Report. All the content of the TCFD report is supervised and approved by the CSO. - In October 2020, Uniper established a Sustainability Council, which is chaired by the CSO. The cross-functional committee monitors the implementation of Uniper's sustainability strategy and governance framework. Meetings take place on a quarterly basis.
Chief Executive Officer (CEO)	The CEO, in cooperation with other top managers of the company, defines the main corporate strategy which clearly focuses on decarbonization and sponsors specific initiatives related to it. The CEO together with the Uniper SE Management Board bears overall responsibility for adopting and implementing Group-wide sustainability measures. As Uniper's highest governance board, the Supervisory Board monitors the Group's fulfilment of its sustainability obligations. Examples: - In a press release in 2020, the CEO highlighted Uniper's target for the European Generation portfolio to be CO2-neutral by 2035. A reduction of 50 % CO2 (compared to base year 2019) shall already be achieved by 2030. The CEO pointed out the relevance of the transition to gas and hydrogen as a carbon-free source of energy. Green hydrogen is a field in which Uniper is interested in and plans to expand its activities. - In a 2021 press release, it was announced that the CEO takes the overall responsibility for Uniper's and Fortum's combined wind and solar activities with the goal to grow a sizeable portfolio of onshore wind and solar-based power generation and drive the energy transition.
Chief Operating Officer (COO)	In his role, the COO is responsible for the operational transition of power generation , engineering and customer solutions businesses in order to achieve Uniper's comprehensive direct (Scope 1) and indirect (Scope 2) emission reduction targets while ensuring security of supply. Examples: - In a 2021 press release, the COO highlighted that Uniper is not only on track to phase out coal-fired generation, but well ahead of its own announcements proving a rapid phase-out together with the announcement to end commercial coal-fired power generation at the German Staudinger power plant. The remaining gas-power unit number 4 at Staudinger continues to fulfill a central function for security of supply in Germany and is an important element to Uniper's "Making Net Zero Possible" project.
Chief Financial Officer (CFO)	The CFO is responsible for Uniper's Risk Management system which covers the identification and mitigation of climate-related risks in line with the TCFD recommendations. Beyond this, the CFO is also responsible for Sustainability and climate-related disclosure as part of Uniper's financial reporting. Example: - Uniper has published its first TCFD report covering all 11 recommendations as part of Uniper's Annual Report 2021.
Other, please specify (Chief Commercial Officer (CCO))	The CCO is responsible for the transition of Uniper's Global Commodities business, which is responsible for the majority of Uniper's Scope 3 emissions. Uniper has committed to reduce its Scope 3 emissions by 35% by 2035. Examples: - In a DEME joint press release of mid of 2021, the CCO highlighted that we need to get hydrogen out of the laboratory and start using it in large-scale applications and marketable industrial solutions. One way of achieving this is to import green ammonia and convert it into hydrogen, which is something Uniper is looking at for Wilhelmshaven on Germany's North Sea coast. Germany will be heavily dependent on imports if we want to use hydrogen to help Uniper to achieve our climate goals.

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 – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	The Uniper SE Board of Management bears overall responsibility for Sustainability Management in Uniper. The Board of Management approves the Sustainability Strategic Plan for the Group and Group Policies implementing the strategy. The Board of Management will be given advice by the central HSSE and Sustainability function and will regularly receive reports regarding sustainability performance and activities including climate related topics such as Carbon Footprint, Climate-Related Risks and Opportunities, Scenario Analysis, Carbon Intensity, Climate Targets, Science Based Targets, TCFD, and CDP, among others. The Board has oversight to direct and integrate sustainability (including climate) -oriented initiatives into Uniper's overall business, with the aim to protect and support the company's performance and long-term interests. The Board supports the development of the Sustainability Strategic Plans (SSP) aimed to drive a sustainability vision for the company in alignment with the overall business strategy through an SDG based approach. Moreover, the Board: - Sets targets (including climate related) and oversees performance against targets. - Approves appropriate budgets requirements for climate-related projects, R&D and investments. - Ensures that ESG risks to the business are managed effectively and opportunities maximised, following a precautionary approach in line with internationally-recognised frameworks, specifically on environment, climate, society, human rights protection and diversity. - Secures and leverages senior level commitment and support for integrating sustainability initiatives and principles (including climate related ones) into core processes and decision-making. - Approves levels of disclosure of company information for the different audiences they are aimed for. Climate related topics do affect Board decisions systematically and increasingly at Uniper given the nature of the business (energy trading and energy generation with fossil fuels), therefore climate related topics are permanently and increasingly present in many decision making processes at high management level, strongly influenced by a changing legal framework (CSR, BREF, upcoming Climate Protection Law), voluntary standards and recommendations (for example GHGP, TCFD, EU Taxonomy), increasing climate related investment criteria from shareholders, demands from NGOs and also reputation related decisions on operations, reporting and investments. In the so called UPD´s (Uniper Performance Dialogs), which take place every quarter with presence of board members, climate relevant KPIs (as for example absolute emissions and carbon intensity) are presented and discussed.

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	- General and sector specific awareness of Climate Change background information - Detailed awareness of Uniper´s Carbon Footprint (according to GHGP criteria)	<Not Applicable>	<Not Applicable>

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainability Officer (CSO)	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Other, please specify (Executive Vice President HSSE & Sustainability)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Chief Risks Officer (CRO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Other committee, please specify (Sustainability Council)	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Other committee, please specify (TCFD Working Group)	<Not Applicable>	Other, please specify (Assessing TCDF recommendations and their implementation)	<Not Applicable>	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Chief Sustainability Officer (CSO): Since Uniper started operations as an independent company in 2016, the CSO role has been integrated to the role of Chief Operations Officer (CSO). The CSO has the highest responsibility for decisions related to corporate Sustainability, including climate-related topics in strategy, investor relations, investment, operations and monitoring.

To direct and integrate sustainability-oriented initiatives into relevant Environmental, Social and Governance (ESG) topics and Uniper's overall business, ensuring protection and support of the business performance and long-term interests of the company, the BoM has delegated responsibility to one of its members as the Chief Sustainability Officer. Specific Responsibilities in relation to climate topics include:

- Sustainability Strategy

The CSO leads the definition of the vision and strategy of the companies climate related objectives and corporate decarbonization path.

- ESG Risk Management

The CSO has a supervisory role in the climate related R&O management

- Stakeholder Engagement

The CSO supervises engagement of internal and external interested parties around climate related topics. He ensures the integration of sustainability initiatives and principles into processes.

- Management Representation & Control

The CSO represents the top management of the company internally and externally, propose communication strategies and documents to publicise the company's efforts and initiatives, such as the Sustainability Report. Ambitious decarbonization targets require internal control, coordination, availability of resources, a communication concept and other elements which are part of the CSO action scope.

EXAMPLE:

- In 2021 the CSO continued sponsoring the Climate Action Team (CAT) created in 2019. The CAT is a transversal team of Uniper professionals aiming to identify climate related topics relevant to the business and propose measures in different directions, including GHG reduction options to fulfil the decarbonization commitments.

Executive Vice President of HSSE & Sustainability (EVP HSSE & Sustainability): The EVP Sustainability & HSSE directly reports to the CSO and provides support to the CSO's decisions and tasks as above. Specific responsibilities include:

· Allocation of resources to the requirements for Sustainability Management

· Monitor and evaluate the effectiveness of Climate related measures and Climate Action Plans

· Identify challenges, climate-related risks, megatrends and emerging issues that will affect Uniper, including climate change related.

· Approve Sustainability budgets, prioritizing initiatives aimed to address key material issues, including budgets for climate related activities.

The EVP HSSE & Sustainability continuously monitors and supervises projects, initiatives and KPIs related to climate.

EXAMPLES:

- Supervising the Uniper Climate Action Team (CAT, created in 2019), which had an intense work during 2021 related to awareness, communications, risk management, target setting, TCFD implementation, SBTi assessment and other climate related topics.

- Carbon accounting information is monitored and tracked via various data collection tools and reported to ensure that our climate target is tracked.

- MRV of GHG.

- Developments in new frameworks and tools are also monitored such as assessment of TCFD recommendations.

Chief Risk Officer (CRO): Highest internal position related to risk management (including climate change related risks), reporting to the Chief Financial Officer (CFO) and member of the TCFD implementation project. The CRO is responsible for ensuring that:

- Processes for the identification, assessment, categorisation, management and follow up of any kind of corporate risks (including climate related risks) are in place

- Climate-related risks, are understood by the organization, by the Management Board as well as Audit & Risk Committee of the Supervisory Board

- Climate related Risks are discussed in the frame of the TCFD implementation project.

- Risks are warehoused according to Uniper's capabilities, core business and risk

- Strategies, management of uncertainty and capital resources.

EXAMPLES:

- Development of the ESG Risk Policy in cooperation with HSSE, including climate related risks

- First discussions on climate related Risk assessment and disclosure (TCFD, CDP)

Sustainability Council

Chaired by the CSO, the council meets each quarter to monitor the implementation of our sustainability strategy and governance framework across the Group. It consists of senior representatives of our key business areas and is supported by in-house and external experts.

EXAMPLE:

At its inaugural meeting in October 2020, the council validated Uniper's 2020 materiality analysis (where GHG emissions again takes highest priority) and approved the integration of the ESG evaluation methodology into our strategic and financial decision making process.

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	Uniper has a short term (STI) and long term (LTI) incentives system in place. STI and LTI are not exclusive to but include climate-related achievements. STI is defined for all executives and includes up to 10% component related to the achievement of HSSE & Sustainability Improvement Plan and other achievements in that area. The improvement plan 2021 covered sustainability, decarbonization actions and health and safety. For higher executives and the Board, the LTI (2021-2023) consists of financial (60%) and non-financial (40%) components. The non-financial components are portfolio transformation and an ESG target (20% each). Portfolio transformation is climate related as it is defined as strategy based. Examples: - The 2021 LTI tranche is linked to the implementation of the TCFD recommendations. - The 2022 LTI tranche is linked to short-term reduction of the European Generation related direct CO2 emissions against a predefined CO2 reduction path.

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	Type of incentive	Activity incentivized	Comment
Board/Executive board	Monetary reward	Emissions reduction project Efficiency project Company performance against a climate-related sustainability index	Uniper´s Board compensation system (including all board members) is well documented and based on the German Stock Corporation Act. It includes a long term incentive component which by definition and among others includes sustainability targets over a performance period of three years. It is paid out in cash and capped at 250% of the target amount. Sustainability targets include ESG targets, described as relevant and measurable sustainability targets in line with Uniper Group´s sustainability strategy. These Non-Financial Performance Targets need to be relevant and measurable. The standards for evaluating performance include, for example, the effects on Uniper's carbon intensity, effects on medium-term growth prospects and the assessment/perception of transformation measures by rating agencies and the capital market. Example: Uniper SE commits within the scope of the ESG targets to develop and introduce a reporting system that complies with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). The aim is to ensure consistent, comparable, clear and reliable disclosure by Uniper SE. According to the disclosure structure provided by TCFD, Uniper SE reports here on the topics of governance, strategy, risk management, metrics and targets. Performance is measured on the basis of a project schedule with defined steps, results and performance levels. If the reporting is fully implemented after one year, this constitutes 180% target achievement, after two years, 150% target achievement, and after three years, 100% or less target achievement. If the reporting system has not been implemented after three years, target achievement constitutes the degree of implementation that has been reviewed and assessed by an external auditor and approved by the Audit and Risk Committee.
Other, please specify (Higher Executive Positions)	Monetary reward	Emissions reduction project Emissions reduction target Efficiency project Environmental criteria included in purchases Supply chain engagement	Financial incentives under the Long Term Incentives (LTI) are directed to higher positions, for instance the head of Asset Operations for the achievement of plant efficiency improvement measures. As per last year, measures increasing efficiency in production (thermal and energy efficiency, which result in specific CO2 reductions) are rewarded at this management level. Example: Facilitating the internal networking for the discussion of specific topics around disclosure or climate targets (expert teams for CDP, TCFD, SBTi) ensuring the participation of all or at least most relevant internal stakeholders and setting clear objectives are examples of performance indicators for higher executive positions at Uniper.
Environmental, health, and safety manager	Monetary reward	Behavior change related indicator Company performance against a climate-related sustainability index	Incentives for climate-related issues are implemented at a project level and therefore incentives are aligned with project performance. This is the general approach for any Uniper employee under the Short Term Incentive model (STI). In the case of employees with responsibilities in projects related to climate change, their performance on specific project related milestones is assessed and rewarded in the frame of the contractual conditions on variable remuneration. Examples: - Progress in Innovation Projects (amount of initiatives which implementation would result in CO2 reductions) by Project Managers. - Energy efficiency (with respective reduction of CO2 emissions) is part of the personal KPI of the Energy Efficiency Manager. - Carbon Footprint (Progress in Scope 3 accountability, following GHGP classification, relevance assessment, data quality) is part of the personal KPI of the Corporate CO2 Accounting Manager. - Carbon Intensity calculation based on Financial Control consolidation approach is part of the personal KPI of the Corporate CO2 Accounting Manager.
Other, please specify (Head of Innovation)	Monetary reward	Emissions reduction project Efficiency project	One of the main focus of Uniper´s innovation unit is to identify and support the development of new energy efficiency/producing/storing technologies from any stage of development. Most of these technologies have CO2 reducing or CO2 recycling potential. The performance targets of Uniper's innovation team members, including the head of innovation are rewarded for their performance against their personal targets defined in accordance with the salary policies of Uniper.

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	3	Within the framework of the implementation of the TCFD recommendations , Uniper has established a new process to identify climate-related risks and opportunities for all business lines in the short, mid and long-term. The short-term period is defined as the time frame in line with Uniper's financial Medium-Term Planning (MTP), which is a group-wide term. On top, short-term climate-related risks and opportunities are also covered by the ERM process.
Medium-term	3	20	Within the framework of the implementation of the TCFD recommendations, Uniper has established a new process to identify climate-related risks and opportunities for all business lines. In order to identify climate-related risks and opportunities, Uniper has applied two climate scenarios. 1. a "well below 2°C" scenario provided by the International Energy Agency (IEA), which has been published in their 2020 World Energy Outlook report. 2. an "above 3°C" Scenario, which is based on both the Current Policy Scenario (CPS) provided by the IEA and two different scenarios provided by the Intergovernmental Panel on Climate Change (IPCC) (i.e. the Representative Concentration Pathways RCP6.0 and RCP8.5, which describe specific greenhouse gas concentrations in the atmosphere (ppmv) and related radiative forcing values (W/m²) by 2100). The mid-term risks are based on a number of assumptions provided by the scenarios (until 2040).
Long-term	20	30	Long term is defined as the time frame for which the uncertainties are much greater and more difficult to measure as this time period is not covered in such detail by the scenarios described above.

C2.1b

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

Climate-related risks are defined as events of high uncertainty that can cause a significant negative financial impact on the company and the environment and/or society.

Within Uniper there are 3 main processes that identify and assess climate-related risks and opportunities depending on the time horizon associated with the risks:

1. Short: The Enterprise Risk Process

2. Short-,Mid-to Long-term: Climate-related risks and changes process (part of the TCFD implementation)

3. Mid-to Long Term Horizon: Uniper Strategy Review Process

In the following, the term "opportunities" is used in line with the CDP wording, whereas in Uniper's annual report the term "chances" is used.

1. Substantive Financial impact is defined as: Any risk which is assessed as having a potential net worst case impact of EUR -20M in any 1 year (EUR +20M for an Opportunity) and has not already been considered in medium-term financial planning, is included in the ERM process. Quantified material Enterprise Risks are assessed based on either the potential impact on net income, the potential impact on adjusted EBIT, the potential impact on cash or any combination of all 3 metrics. If the impact on different metrics is distinctively different, the risk or chance is split in several separate items. Any insurance coverage and/or provisions that reduce the worst-case impact are also considered. The likelihood of occurrence is also considered and a range of statistical distributions support in deriving an expected value risk impact. Where quantification is not possible for varying reasons, a qualitative assessment of individual risks is made. Qualitative risks are assessed based on pre-defined ranges for their likelihood of occurrence and the materiality of their potential impact. Uniper considers risks to have a substantive financial impact when they exceed the above mentioned criteria (potential net worst case impact of EUR -20M in any 1 year and EUR +20M for an opportunity) to be included in the Enterprise Risk Process. Based on the assessment of the risk, actions are taken to ensure that the impacts are mitigated and managed as effectively as possible. This is a continuous and interactive process with relevant stakeholders and is subject to ongoing monitoring and review.

2. As part of the TCFD implementation. Uniper defined a process to identify climate-related risks and opportunities. To evaluate the overall relevance for the Uniper group, each of the identified risk and opportunity has been assessed based on its potential earnings impact on the respective business line as well as its expected timing implication, i.e. short-term (up to 3 years), mid-term (3 to 20 years), or long-term (20 to 30 years). Accordingly, risks and chances, which have a high earnings contribution and are considered highly relevant for the respective business lines, received the highest relevance score. Existing risk reduction measures were checked for adequacy, and, if necessary, new measures were proposed. The outcome of the workshops has been incorporated into Uniper’s strategy process and were presented to the Board of Management and the Supervisory Board in the fall of 2021

3. Climate-related risks and opportunities are also specifically identified as part of the strategy process and are based on known facts such as the decarbonization of the energy sector which poses a risk or opportunity for Uniper and anticipating trends such as shifts towards new and cleaner technologies which could pose an opportunity. Each strategic risk and opportunity is assessed based on the perceived strategic importance to the organisation, aligned to the defined Corporate Strategy. If a risk is perceived as having strategic importance, then a suitable mitigation strategy is developed to mitigate the negative impact as much as possible. If an opportunity is perceived as having strategic importance then an active strategy to pursue and maximize the positive impact of the opportunity is developed. Continuous monitoring of the delivery of the Corporate Strategy is performed by the Uniper Board of Management with oversight from the Uniper Supervisory Board.

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
Uniper´s risk management process is overseen by the Uniper Board of Management and the Audit & Risk Committee of the Supervisory Board. The Enterprise Risk Process (Short-term): On a quarterly basis, the material financial risks from the Group are reported by the Chief Risk Officer to both governance bodies. The key risks are publicly communicated in the Uniper SE Annual Report. The basis for the transparency of the material financial risks and to enable them to be managed is the Group Enterprise Risk Management (ERM) process. The ERM process requires that all functions along the value chains such as direct operations, upstream and downstream across the Uniper Group identify and assess their short to long term material risks, including those that are climate-related, on a quarterly basis through a bottom-up process. Uniper has a bottom up process to identify, assess and manage climate related and ESG risks independent of their financial impact. ESG risks are reviewed from an inside out and an outside in perspective. It involves a cross-functional group to provide expert input and verification on risks and controls that may span many different functions. Risks identified in the ESG process feed into ERM where quantitative/qualitative thresholds are met. These risks are identified on different levels i.e. political developments are monitored on national/regional levels and form part of wider-ranging global risks impacting the organization. The identified risks are assessed in quantified financial terms wherever possible. Climate-related risks and opportunities are managed in the same way. They are managed proactively and continuously by the most effective measures and actions available. Measures and actions include but are not restricted to the implementation of adequate and effective controls, avoiding and restricting specific actions and options, and ensuring effective legal and insurance coverage. They are managed by the individual function that is most capable of managing the specific risk based on expertise and experience of the risk topic. Uniper has a well defined risk categorization, where climate aspects are considered across all categories if they are an underlying driver. As mentioned in our TCFD report the climate risk and chances process covers short medium and long term climate risks and opportunities and also all value chains direct operations, upstream and downstream. In February 2022, Uniper published its first TCFD report as part of the annual report, that covers the identification of climate-related risks and opportunities in line with the TCFD framework for the short-,mid-to long-term. the process will be done annual and has the purpose to ensure the validity and resilience of Uniper´s strategy. Therefore, Uniper conducted ten structured, in-depth workshops across the major business areas on climate-related risks and chances as well as the corresponding mitigation measures. More than 80 representatives from business and enabling functions (incl. Corporate Strategy, Market Analytics, Governmental Affairs, Sustainability, Finance, Investor Relations, Risk Management) participated in those workshops. In order to structure and facilitate the climate-related risks and chances identification, the workshops have been based on a “well below 2°C” and an “above 3°C” scenarios. Within the workshops around 70 short to long term risks and chances with corresponding mitigation measures were identified and the respective drivers were discussed. The most important risks and opportunities were published in the TCFD report in Uniper´s Annual report. The identified measures were considered during the strategy process. Risk categorization: Physical (acute and chronic), Transition (Policy and Legal, Technology, Market, Reputation). Transition risk: To support the implementation of the Paris Agreement various measures are taken by regulators that have a direct or indirect impact on Policies & Legal actions, technological changes, market dynamics incl. demand and supply pattern, and reputation. With respect to Policy & Legal Uniper identified an increasing lieklihood of legal claims, higher CO2 prices and the extension of CO2 regulation, and an impact on asset lifetime due to changes in climate policy framework and regulation may lead to shutting down some of its assets which are made uneconomical by this development, plus higher costs and lower margins for Uniper´s fossil and Global Commidties business in the short-to long-term. To manage this Uniper continually monitors the Carbon price development and the political and regulatory decisions driving it. Where possible, hedges are put in place however there will always remain a residual open position which is exposed to price increases. For the mid-to long-term Uniper has a strategy in place that will mitigate those risks by transofrming the portfolio towards environmentally friendlier solutions. With respect to market, Uniper identified the increasing competition in renewables and ceteris paribus decreasing power price levels and the increase in global non-energy commodity prices may have a negative impact on Uniper¨s generation business in the mid-to long-term. Uniper´s response is to transform its business in line with Uniper´s strategy. Physical risk: Climate change may lead to lower availability and energy production from Uniper’s asset fleet. Longer hot/dry periods of recent years have led to cooling water availability issues because river levels were too low to extract water, or water temperatures were too high, impacting efficiency and creating the potential to breach cooling water return temperature limits. Low water levels on rivers increase fuel shipping costs as and they reduce energy production volumes in run-of-river plants. To cope with the situation, fuel shipping can be scheduled such that drought periods are avoided, or alternate transportation is being pursued. Extreme weather scenarios may lead to damages to our plants from floods/storms, lightning or subsequent consequence of weather i.e. wildfires which could lead to outages. Management actions include: investment in technology improvements and asset optimisation, ongoing maintenance and inspection, re-assessment of design floods for potential adjustment of dams and spillways and business continuity planning to manage operations. In addition plant damage as well as business interruption is insured. All climate-related risks are identified at Uniper. However, a prioritization is undertaken based on the potential impact materiality, with the material climate-related risks being given greater management attention and focus via the Group-wide Enterprise Risk Process and/or Strategy Review process. Climate related risks that could potentially become a threat to Uniper's existence are managed effectively and countermeasures are taken.

C2.2a

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

	Relevance & inclusion	Please explain

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	This risk type is part of Uniper's Enterprise Risk & Opportunity management process. This process focuses on identifying, assessing and managing any risk/opportunity with a substantive financial impact on the Group. This includes risks & opportunities triggered by climate or ESG related events. Uniper has a bottom up process to identify, assess and manage climate related and ESG risks independent of their financial impact. ESG risks are reviewed from an inside out perspective as well as an outside in perspective. The process involves a cross-functional group to provide expert input and verification on risks and controls that may span many different functions. Risks identified in the ESG process feed into the ERM process where thresholds are met, quantitative and qualitative. One example of a regulatory risk is the regulatory uncertainty regarding the lifetime of assets due to changes and framework of regulation. This impacts the entire generation fleet as well as the commodity business. Example: Natural gas operated assets represented 50,8% of Unipers net installed capacity and 53,9% of electricity generation in 2021. Reaching CO2 intensities which allow gas assets to be classified as "Sustainable" according to the classification criteria of the EU Taxonomy regulation is a major technological challenge Uniper operations face today. Reducing the current level of emissions per MWh to the threshold level can only be reached with significant technological changes, which demand both innovation (example : blending of natural gas with green hydrogen) and high investment. As long as Uniper operates gas assets with higher intensities than the EU Taxonomy threshold (270gCO2/kWh), access to capital is expected to be at a relatively high cost. This risk is both technological and regulatory.
Emerging regulation	Relevant, always included	This risk type is part of Uniper's Enterprise Risk & Opportunity management process as well as Uniper´s climate-related risks and opportunities process, which has been implemented in 2021 in line with the TCFD framework. This processes focuses on identifying, assessing and managing any risk/opportunity with a substantive financial impact on the Group. This includes risks & opportunities triggered by climate or ESG related events. The bottom up process to identify, assess and manage climate related and ESG risks independent of their financial impact. ESG risks are reviewed from an inside out perspective as well as an outside in perspective. The processes involve cross-functional expert groups to provide input and verification on risks and controls that may span many different functions. Risks identified in the ESG process feed into the ERM process where thresholds are met, quantitative and qualitative. Risks identified in the climate-related risks and opportunities process feed into Uniper´s strategy development. Example: An emerging regulation risk from potential CO2 regulations in Russia. On September 21, 2019, the Government of the Russian Federation signed Decree No. 1228 "On the adoption of the Paris Agreement." In accordance with the obligations assumed by the Russian Federation, a law on state regulation of greenhouse gas emissions is to be adopted in the coming years. On July 2, 2021, President Vladimir Putin signed legislation on Friday that will require businesses to report their greenhouse gas emissions and has been described as Russia's first step towards carbon regulation to combat climate change. The bill is currently under discussion. The general logic of the various versions of the bill comes down to the establishment of certain limits for each CO2 issuer and obligations to pay for the excesses of the established limits. The implementation of the CO2 trading on the commodity exchange seems to be possible. This is also seen as an opportunity.
Technology	Relevant, always included	This risk type is part of Uniper's Enterprise Risk & Opportunity management process as well as Uniper´s climate-related risks and opportunities process, which has been implemented in 2021 in line with the TCFD framework. This processes focuses on identifying, assessing and managing any risk/opportunity with a substantive financial impact on the Group. This includes risks & opportunities triggered by climate or ESG related events. The bottom up process to identify, assess and manage climate related and ESG risks independent of their financial impact. ESG risks are reviewed from an inside out perspective as well as an outside in perspective. The processes involve cross-functional expert groups to provide input and verification on risks and controls that may span many different functions. Risks identified in the ESG process feed into the ERM process where thresholds are met, quantitative and qualitative. Risks identified in the climate-related risks and opportunities process feed into Uniper´s strategy development. Example: Natural gas operated assets represented 50,8% of Unipers net installed capacity and 53,9% of electricity generation in 2021. Reaching CO2 intensities which allow our gas assets to be classified as "Sustainable" according to the classification criteria of the EU Taxonomy regulation is a major technological challenge Uniper operations face today. Reducing the current level of emissions per MWh to the threshold level can only be reached with significant technological changes, which demand both innovation (example : blending of natural gas with green hydrogen) and high investment. As long as Uniper operates gas assets with higher intensities than the EU Taxonomy threshold (270gCO2/kWh), access to capital is expected to be at a relatively high cost. This risk is both technological and regulatory.
Legal	Relevant, always included	This risk type is part of Uniper's Enterprise Risk & Opportunity management process as well as Uniper´s climate-related risks and opportunities process, which has been implemented in 2021 in line with the TCFD framework. This processes focuses on identifying, assessing and managing any risk/opportunity with a substantive financial impact on the Group. This includes risks & opportunities triggered by climate or ESG related events. The bottom up process to identify, assess and manage climate related and ESG risks independent of their financial impact. ESG risks are reviewed from an inside out perspective as well as an outside in perspective. The processes involve cross-functional expert groups to provide input and verification on risks and controls that may span many different functions. Risks identified in the ESG process feed into the ERM process where thresholds are met, quantitative and qualitative. Risks identified in the climate-related risks and opportunities process feed into Uniper´s strategy development. Example of a legal risk from potential penalties and fines against Uniper for failing to comply with the EU Emissions Trading Scheme. In March 2018, Uniper notified the Environment Agency, the environmental regulator for England, about historic under-reporting of CO2 emissions from one of its power stations in the United Kingdom in 2015 and 2016 under the EU Emissions Trading scheme. The Company conducted an extensive investigation and took corrective action. In its response received in February 2019, the Environment Agency accepted that the error was an isolated and unintentional, that Uniper had self-reported the error, fully co-operated and corrected the error. In consideration of these discharges, the Environment Agency reduced the initial civil penalty to the lowest possible level of the range for a large organization. This was an isolated incident and processes reviewed across Uniper however it remains a potential risk with potentially large financial impacts.
Market	Relevant, always included	This risk type is part of Uniper's Enterprise Risk & Opportunity management process as well as Uniper´s climate-related risks and opportunities process, which has been implemented in 2021 in line with the TCFD framework. This processes focuses on identifying, assessing and managing any risk/opportunity with a substantive financial impact on the Group. This includes risks & opportunities triggered by climate or ESG related events. The bottom up process to identify, assess and manage climate related and ESG risks independent of their financial impact. ESG risks are reviewed from an inside out perspective as well as an outside in perspective. The processes involve cross-functional expert groups to provide input and verification on risks and controls that may span many different functions. Risks identified in the ESG process feed into the ERM process where thresholds are met, quantitative and qualitative. Risks identified in the climate-related risks and opportunities process feed into Uniper´s strategy development. For example a market risk is from changing customer behavior towards low carbon energy generation which is an industry wide risk and needs to be dealt with on a mid to long term strategy review. This risk has been assessed in Uniper's Group Strategy process.
Reputation	Relevant, always included	This risk type is part of Uniper's Enterprise Risk & Opportunity management process as well as Uniper´s climate-related risks and opportunities proces, which has been implemented in 2021 in line with the TCFD framework. This processes focuses on identifying, assessing and managing any risk/opportunity with a substantive financial impact on the Group. This includes risks & opportunities triggered by climate or ESG related events. The bottom up process to identify, assess and manage climate related and ESG risks independent of their financial impact. ESG risks are reviewed from an inside out perspective as well as an outside in perspective. The processes involve cross-functional expert groups to provide input and verification on risks and controls that may span many different functions. Risks identified in the ESG process feed into the ERM process where thresholds are met, quantitative and qualitative. Risks identified in the climate-related risks and opportunities proces feed into Uniper´s strategy development. Example of reputational risk from Uniper's contribution to climate change from carbon emissions may affect its reputation as a large polluter and contributor to the impacts caused by climate change. This in turn may affect investment into Uniper - investors of Uniper expect to invest in a company that only works with ethical suppliers and that the risks are minimized through effective due diligence.
Acute physical	Relevant, always included	This risk type is part of Uniper's Enterprise Risk & Opportunity management process as well as Uniper´s climate-related risks and opportunities process, which has been implemented in 2021 in line with the TCFD framework. This includes risks & opportunities triggered by climate or ESG related events. The bottom up process to identify, assess and manage climate related and ESG risks independent of their financial impact. Risks identified in the ESG process feed into the ERM process where thresholds are met, quantitative and qualitative. Risks identified in the climate-related risks and opportunities process feed into Uniper´s strategy development. For example acute physical risk from increased severity of extreme weather events leading to impacts such as floods/storm damage to Uniper assets. A recent example at Grain power plant has shown that after a severe storm which caused Chimney Stack bolts to come loose and fall from height, a full site survey has been completed to understand the extent of the damage. Following this survey experts have been engaged to look into potential structure upgrades to prevent similar incidents across the site. A similar storm related issue occurred at Schkopau where damage of stair towers and boiler house façade occurred due to severe storms, following the inspection reports the refurbishment of cladding panels was carried out in 2020 for stair towers and 2021 for the boiler house. Another extreme weather event is the increased accumulation of debris at Uniper´s hydroelectrical plants during flood events, which could result in damages/significant wear and tear to our installations such as the weirs and gate structures, and lead to operations suspension impacting production. Also at Ratcliffe power station - high ambient air temperature limiting the output of the open cycle Gas Turbine and cold weather extremes impacting the operation of Human Machine Interface units on environmental control plant. To mitigate the business impact due to extreme weather scenarios, plant damage as well as business interruption is insured.
Chronic physical	Relevant, always included	This risk type is part of Uniper's Enterprise Risk & Opportunity management process as well as Uniper´s climate-related risks and opportunities process, which has been implemented in 2021 in line with the TCFD framework. This includes risks & opportunities triggered by climate or ESG related events. The bottom up process to identify, assess and manage climate related and ESG risks independent of their financial impact. Risks identified in the ESG process feed into the ERM process where thresholds are met, quantitative and qualitative. Risks identified in the climate-related risks and opportunities process feed into Uniper´s strategy development. For example, there is a chronic physical risk from rising ambient temperatures on Uniper assets. Rising ambient temperature from climate change can lead to lower production availability from Uniper's asset fleet due to the limited cooling water capacity, potential cooling water return temperature issues as restricted by the permits for water extraction, and the loss in efficiency of the water steam cycle itself. Since 2017, Uniper had several events of restricted operations due to external influences that are connected to increased ambient temperatures. In this period, Uniper has experienced almost 8 TWh of production loss in its GT & Steam fleets due to ambient temperature. In 2020 alone that figure was almost 2 TWh. Increasing trends of ambient loss during the last decade are observable at our Gönyü and Irsching power plants from 2011 through to today.

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

Emerging regulation	Mandates on and regulation of existing products and services

Primary potential financial impact
Decreased asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets

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

Company-specific description
Uniper currently still owns and operates around 6 GW of coal-fired capacity in Europe which reflects 18% of Uniper's total global capacity. Uniper operates some of Europe's biggest and best coal-fired power stations. This makes Uniper most affected by coal exit measures in the EU. European governments have set dates for coal exit. In case the governments decide on earlier exit dates than the current financial planning assumes, without offering compensation, Uniper faces a risk from potential impairments across its European coal fleet. There is a risk of lost earnings and social plan and dismantling costs. In 2020, the German Parliament adopted the coal exit law which confirmed a stepwise exit of coal generation by 2038. The law did not prohibit a commissioning of Datteln 4 and intends to take out hard coal plants until 2026 via shut down tenders. Uniper announced that it would close approximately 1,500MW of hard-coal capacity by end of 2022 and a further 1,400MW by end of 2025. Uniper participated in the first two auctions. Two hard coal power plants were selected to be closed under the law soon in exchange for the offered auction bet. In the Netherlands, the Dutch Senate passed the prohibition to use coal for power generation per 1st January 2030 into law in early December 2019. The law confirms that Uniper´s Maasvlakte 3 power plant will be closed by 2029 with no compensation. After the "Urgenda" verdict of the Dutch Supreme Court from 20th December 2019, the Dutch government is looking for additional measures to achieve the intended greenhouse gas reduction target at the end of 2020. The government started talks with the remaining power producers from hard coal how to implement the Urgenda verdict. In parallel an amendment of the Dutch coal exit act is discussed in Parliament. Furthermore to secure our legal position Uniper filed claims before a Dutch and an European court in April 2021. In 2019, EU carbon emission intensity standards for capacity markets were introduced, designed to limit coal plant eligibility to receive future capacity payments. These initially apply to new plants but capture existing capacity from mid-2025. The UK government has consulted on bringing forward the relevant requirements to October 2024. The sites impacted or potentially impacted for earlier coal closure than our financial planning for Uniper are Datteln 4 (Germany), Ratcliffe (UK) and Maasvlakte (Netherlands).

Time horizon
Medium-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)
50000000

Potential financial impact figure – maximum (currency)
200000000

Explanation of financial impact figure
The close out is mid-term but the impact on Uniper's financial planning e.g. via impairments starts with the decision of an early exit, in case no adequate compensation will be granted, while social and dismantling costs will mostly occur only at the time of closure. To reflect this the risk was classified as the lowest denominator short term but different impacts will affect Uniper in the short, medium and long term.The potential financial impact figures (range) have been taken from our TCFD Report (assessment basis Q2 2021). Due to commodity price rally during second half of 2021, this range will change in the future reports. The corresponding risk assessment has not been closed yet and will be published in future reports.

Cost of response to risk
0

Description of response and explanation of cost calculation
Uniper supports the EU legally binding climate agreements but this must be aligned with continuing to supply a stable and affordable power supply. To limit regulatory risk, the Uniper Group maintains intensive dialogue with external stakeholders such as government agencies, political parties, regulators and associations to identify in a timely manner any potential adverse effects on the Uniper Group arising from changes in the political, regulatory and legislative environment and to reduce this risk through involvement in shaping the proposed measures. In case of the coal exit this means Uniper will accept the political decisions made but will also seek compensation for any adverse financial effects. The measures described for the management method are taken by various departments within Uniper and are linked to and required for different business activities. The costs incurred cannot therefore be clearly allocated to this specific risk. A calculation of costs would involve mainly time of own staff but would have a very high uncertainty level which would end in a mere speculative approach.

Comment

Identifier
Risk 2

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

Risk type & Primary climate-related risk driver

Market	Other, please specify (Carbon Price)

Primary potential financial impact
Increased direct costs

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

Company-specific description
A significant proportion of Uniper's generation is based on fossil fuel generation. That means Uniper is exposed to carbon price changes to a greater extent that utilities with lesser conventional generation share. To support the implementation of the Paris Agreement at Uniper various measures are taken to increase the Carbon price. The Market Stability Reserve (MSR) in the European Emissions Trading System is one component with effect across Europe. This is complemented (or planned to be complemented) by various country specific measures such as Carbon floor prices or Carbon Taxes. Due to this, Uniper expects an increase of the Carbon price over the coming years which will increase the cost for its fossil fuel based energy production. To the extent these additional costs cannot be passed on, Uniper will suffer from lower margins and may have to shut down some of its assets which are made uneconomical (so called "out of money") by this development.

Time horizon
Medium-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)
50000000

Potential financial impact figure – maximum (currency)
200000000

Explanation of financial impact figure
Short-term impact is based on Uniper's average unhedged Carbon position until 2025 and the expected Carbon price increase until then. Figure for this cannot be disclosed - this information is confidential. The mid-to long-term impact is based on the development of the demand and/or margins for fossil-based power. The potential financial impact figures (range) have been taken from our TCFD Report (assessment basis Q2 2021). Due to commodity price rally during second half of 2021, this range will change in the future reports. The corresponding risk assessment has not been closed yet and will be published in future reports.

Cost of response to risk
0

Description of response and explanation of cost calculation
Uniper continually monitors the Carbon price development and the political and regulatory decisions driving it, e.g. the impact Covid-19 energy demand deterioration has on the demand for EUAs or the way how supplementary measures like coal exit tenders in Germany impact the demand side for EUAs. The insights of this monitoring, e.g., expected supply-demand balance of EUAs, expected EUA prices etc., are typically part of a carbon hedging strategy, which furthermore considers Uniper's commodity risk framework. As a result of this, carbon positions are closed by buying EUA to protect Uniper against rising prices or are kept as open positions, in case falling prices are expected. By this Uniper can manage the risks and opportunities resulting from fluctuating carbon prices. The measures described for the management method are taken by various departments within Uniper and are linked to and required for different business activities. The costs incurred cannot therefore be clearly allocated to this specific risk.

Comment

Identifier
Risk 3

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

Risk type & Primary climate-related risk driver

Acute physical	Heat wave

Primary potential financial impact
Decreased revenues due to reduced production capacity

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

Company-specific description
Rising ambient temperature from climate change leads to lower production availability from Uniper's asset fleet due to the limited cooling water capacity, as restricted by the permits for water temperature and the loss in efficiency of the water steam cycle itself. Since 2017, Uniper had several events of restricted operations due to external influences that are connected to increased ambient temperatures. In this period, Uniper has experienced almost 8 TWh of production loss in its GT & Steam fleets due to ambient temperature. In 2020 alone that figure was almost 2TWh. Increasing trends of ambient loss during the last decade are observable at our Gönyü and Irsching power plants from 2011 through to today. Similar trends can be seen developing for the remaining thermal sites, requiring increasing restrictions in the operational regimes. Another direct or indirect impact of climate change are lower river water levels and decreasing average annual run-off with impact on production. Lower water levels of the river Rhine in the year 2018 led to multiple cases of interrupted operations at our power plant Scholven, owing to a lack and delay of fuel (coal) supply. What is currently also being monitored at various power plants is the growing of algae due to increasing temperatures, which though potentially mitigated by cooling water system cleaning

measures, could restrict efficiency of cooling plant such as condensers with a follow impact on efficiency. The potential for detrimental health impact is also well known and requires constant monitoring.

Time horizon
Short-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)
200000000

Potential financial impact figure – maximum (currency)
500000000

Explanation of financial impact figure
The total impact for Uniper's European thermal assets amounting to almost 2.0 TWh operational losses in year 2020. It has largely increased compared to 2018, where we had losses due to high ambient temperature of approx. 0.5 TWh. Moreover, unforeseen cost of repairs of the damages caused by storms, additional costs of fuel shipping etc. also add to the overall financial impact. The potential financial impact figures (range) have been taken from our TCFD Report (assessment basis Q2 2021). Due to commodity price rally during second half of 2021, this range will change in the future reports. The corresponding risk assessment has not been closed yet and will be published in future reports.

Cost of response to risk
0

Description of response and explanation of cost calculation
In addition to complying with industry standards & environmental management systems such as ISO14001, Uniper tackles these critical risks via the Uniper Management Framework and our Physical Asset Policy (similar to ISO55001). The Asset Engineering Risk & Opportunity (AERO) process is implemented systematically within Uniper's European generation portfolio to identify such risks in due time and assess their impact on the business. The outcome of these risk assessments is used to determine the right risk mitigation strategies and allocate the required budget for the projects. The cyclic review nature of this process ensures a continuous monitoring of the risk levels for Uniper's assets. For example: One of the opportunities identified to reduce the impact of restricted operations is the extension of cooling water capacity. Uniper is considering as a mitigation measure, investing in such an extension project at some of our power stations in order to meet better production targets in the summer months. Additionally, contingencies are regularly planned and adapted for certain periods to ensure uninterrupted fuel supply. The measures described for the management method are taken by various departments within Uniper and are linked to and required for different business activities. The costs incurred cannot therefore be clearly allocated to this specific risk.

Comment

Identifier
Risk 4

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 asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets

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

Company-specific description
To support the implementation of the Paris Agreement various regulatory measures are taken like the German coal exit law. Potential "gas exit" discussions and the extension of regulations (e.g. on methane leackages) in Europe may have a significant impact on Uniper´s gas assets including gas-fired power plants and the gas midstream business. The increased regulatory uncertainty about the lifetime of gas assets might also impact customer demand.

Time horizon
Long-term

Likelihood
More likely than not

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)
50000000

Potential financial impact figure – maximum (currency)
200000000

Explanation of financial impact figure
The close out is long-term but the impact on Uniper's financial planning e.g. via impairments starts with the decision of a potential gas exit in case no adequate compensation will be granted, while social and dismantling costs will mostly occur only at the time of closure. The impacts will affect Uniper in the mid-to long term when a decision on a gas exit will be made. The impact on Uniper's gas midstream business and the customer demand on gas is also expected to occur in the mid-to-long-term then. Specific figures cannot be estimated as of today.

Cost of response to risk
0

Description of response and explanation of cost calculation
Uniper supports the EU legally binding climate agreements but this must be aligned with continuing to supply a stable and affordable power supply. To limit regulatory risk, the Uniper Group maintains intensive dialogue with external stakeholders such as government agencies, political parties, regulators and associations to identify in a timely manner any potential adverse effects on the Uniper Group arising from changes in the political, regulatory and legislative environment and to reduce this risk through involvement in shaping the proposed measures. The measures described for the management method are taken by various departments within Uniper and are linked to and required for different business activities. The costs incurred cannot therefore be clearly allocated to this specific risk.

Comment

Identifier
Risk 5

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

Risk type & Primary climate-related risk driver

Legal	Exposure to litigation

Primary potential financial impact
Increased direct costs

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

Company-specific description
The Uniper Group's operations in a variety of jurisdictions expose the Group to various legal risks. Due to its comparably high carbon footprint of its conventional power generation portfolio as well as its Gas midstream business, Uniper faces an increasing likelihood for legal claims with respect to Uniper´s past, current and future carbon emissions. These mainly comprise risks/chances arising from threatened or pending legal proceedings with regard to energy law and regulatory issues and most recently potential climate litigations.

Time horizon
Medium-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)
50000

Potential financial impact figure – maximum (currency)
100000000

Explanation of financial impact figure
The financial impact depends on the outcome of potential legal claims against Uniper and the impact on the operation and lifetime of Uniper's assets. Specific figures are confidential and therefore cannot be disclosed.

Cost of response to risk
0

Description of response and explanation of cost calculation
In order to minimize legal risks for Uniper, significant developments in the relevant jurisdictions are continuously monitored and actively communicated to the functions of the Uniper organization concerned. In addition, the legal department is involved at an early stage in contract negotiations and imminent legal proceedings in order to minimize risks and take advantage of chances by providing appropriate procedural support and assisting in the drafting of contracts in advance. Litigation costs of potential legal claims against Uniper cannot be disclosed.

Comment

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
Markets

Primary climate-related opportunity driver
Other, please specify (Profit from higher Power Prices from CO2 free assets)

Primary potential financial impact
Other, please specify (Increased power prices)

Company-specific description
As Power is still to a big extent produced with fossil fuels where emissions need to be covered via Carbon certificates, the Carbon price is a major driver of the power price. The discussed coal exit will reduce the available Supply and is expected to contribute to increasing power prices. As Uniper also has Hydro and Nuclear assets which don't require Carbon certificates it would benefit from higher power prices without the offset on the Carbon cost side.

Time horizon
Medium-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)
50000000

Potential financial impact figure – maximum (currency)
200000000

Explanation of financial impact figure
Increased revenues from Nuclear and Hydro plants due to expected increasing power prices. Depending on hedge ratio, Carbon price increase and subsequent ceteris paribus increase of outright power prices. Financial impact figures cannot be disclosed due to confidentiality.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
Ceteris paribus of all other factors impacting the market prices, e.g., supply-demand balance, fuel prices (in particular coal and gas prices) an increase in carbon prices should result in an increase in outright power prices. Depending on Uniper's commodity risk appetite and assuming risking carbon and thus outright power prices over time – not forward selling power production in nuclear and hydro assets, provides Uniper with the chance to benefit from a ceteris paribus increase in carbon prices. This implies that – if supported by risk limits – the hedge ratio for these portfolios would be reduced. No additional cost to realize the opportunity. It would be a passive profit from CO2 free assets as a consequence of increased power prices due to the impact of increased CO2 price.

Comment

Identifier
Opp2

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

Opportunity type
Markets

Primary climate-related opportunity driver
Other, please specify

Primary potential financial impact
Other, please specify (Higher electrcity/ commodity price volatility and lower grid stability)

Company-specific description
Uniper could benefit from stronger renewables feed-in, which increases the volatility and demand for flexible power generation and grid stability solutions. Gas fired power plants may be needed within the merit order alongside the planned coal exit and expected rising power prices and gas through additional overall market demand. This could happen as flexible gas plants are an ideal partner to secure security of supply for an increasing renewable production. In addition to this Uniper could benefit from higher revenues resulting from possible higher gas sales and gas optimization revenues on the back of the above effects. In addition, Uniper has embarked on a journey to decarbonize as soon as technically and commercially possible. As part of this Uniper could benefit from adding new low carbon gases to the existing gas activities and transform the current natural gas business in a low carbon gas business, with similar changes happened in Unipers' customers base. On the one hand this would allow for continuation of Unipers' gas portfolio activities whilst on the other hand adding value by providing solution to our customers to support their decarbonization activities.

Time horizon
Medium-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)
50000000

Potential financial impact figure – maximum (currency)
200000000

Explanation of financial impact figure
Increased revenues from gas plants and Gas Sales & Optimization business in case gas plants come into the merit order.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
For some of our gas plants our strategy is to ensure these are operated and maintained in the most (cost) effective way and targeted improvements for e.g. efficiency, flexibility, component life etc are assessed and implemented. Secondly, mothballed gas plants while out of the merit order to keep the optionality to bring them back into the market once energy-only or capacity remuneration is attractive again. No additional cost to realize the opportunity.

Comment

Identifier
Opp3

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

Opportunity type
Markets

Primary climate-related opportunity driver
Access to new markets

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description
Developments in the political and regulatory environment in the countries in which Uniper is active can have a positive impact on the earnings, financial and asset situation. For example, the introduction of additional capacity markets could mean that the supply of flexible power plants to compensate for the fluctuating generation of renewable energies is possible under better conditions than previously planned. In addition, new technologies such as flexibility and storage solutions, the conversion of electricity from renewable energies into gas (Power to Gas), liquid fuels (Power to Liquid) or heat (Power to Heat) as well as the recycling of carbon dioxide (Carbon Capture & Utilization, CCU) can open new markets. We also enable the integration of renewable power by developing new flexibility solutions. Beside, we investigate smart and green heat solutions as well as new waste-, bio-, and CO2-based fuels for the hard-to-decarbonize sectors heat and mobility. Also, we develop products and services in the area of transportation which could open up additional sources of revenue, for example LNG for trucks/ships. One outcome of Uniper's past innovation agenda is the build-up of a dedicated Hydrogen unit with dedicated budget to develop large scale business models around Hydrogen. Decarbonization is the most important driver for long-term scalable hydrogen business, but there are also short-term drivers such as local emission reduction, security of supply, diversification, system optimization and technology switch. Beside our already operational sustainable hydrogen production installations (electrolysis in Falkenhagen and Reitbrook, Germany) we investigate, where hydrogen could play already today a relevant role, to support and develop the sustainable hydrogen market to take off. The uptake of the market depends mainly on political agenda and technology costs.

Time horizon
Medium-term

Likelihood
More likely than not

Magnitude of impact
Medium-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)
50000000

Potential financial impact figure – maximum (currency)
200000000

Explanation of financial impact figure
We expect to identify new products and markets which can replace some of the lost revenues from coal exit and plant closures due to other reasons.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
Uniper considers the three megatrends decarbonization, decentralization and digitization as the main drivers for the expected changes in the energy landscape. Innovation and new technologies play a key role for Uniper in shaping these trends and to profit from them commercially. For this purpose Uniper continuously analyses the evolution

and development of new technologies in order to generate new and scalable business models on this basis. Uniper operates an innovation portfolio which actively addresses the megatrends decarbonization, decentralization and digitization. The portfolio focusses on topics where Uniper can deploy its capabilities and assets in an optimal way in order to add value for a sustainable transformation of the energy system. Examples for Uniper's innovation activity are various projects around new flexibility and storage solutions, Power to Gas technology, alternative fuels, Carbon Capture and Utilization and Biomass-to-X and Smart and Green Heat technologies. There is a chance that these innovation activities generate more value than planned in the MTP. Significant opportunities regarding the market environment are addressed in the strategy process through diversification of the Uniper portfolio. Uniper is also diversifying its products and engineering services and expertise by entering developing and emerging markets. Our Innovation and Energy and Engineering services have set up dedicated teams and projects to realize these potential opportunities. An annual innovation budget is devoted to develop these topics into pilot projects and market tests.

Comment

Identifier
Opp4

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

Opportunity type
Markets

Primary climate-related opportunity driver
Other, please specify

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

Company-specific description
Developments in the political and regulatory environment in the countries in which Uniper is active can have a positive impact on the earnings as the demand for carbon free generation including guarantees of origin will increase with changing customer behaviour patterns (including sector coupling and electrification). As Uniper generates electricity with its hzdro and nuclear assets that don´t produce CO2, Uniper can directlz benefit from this increased demand.

Time horizon
Medium-term

Likelihood
More likely than not

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)
50000000

Potential financial impact figure – maximum (currency)
200000000

Explanation of financial impact figure
Increased revenues from Nuclear and Hydro plants due to expected increasing demand for carbon-free power. Depending on hedge ratio, Carbon price increase and subsequent ceteris paribus increase of outright power prices. Financial impact figures cannot be disclosed due to confidentiality.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
Ceteris paribus of all other factors impacting the market prices, e.g., carbon prices, fuel prices (in particular coal and gas prices) an increase in demand for carbon-free power should result in an increase in outright power prices and the value for guarantees of origin. Depending on Uniper’s commodity risk appetite and assuming risking carbon and thus outright power prices over time – not forward selling power production in nuclear and hydro assets, provides Uniper with the chance to benefit from a ceteris paribus increase in demand. This implies that – if supported by risk limits – the hedge ratio for these portfolios would be reduced. No additional cost to realize the opportunity.

Comment

C3. Business Strategy

C3.1

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

Row 1

Transition plan

No, our strategy has been influenced by climate-related risks and opportunities, but we do not plan to develop a transition plan within two years

Publicly available transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)

<Not Applicable>

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

Our strategy has been developed against the background of different long-term climate scenarios, including a well below 2°C scenario. Uniper's long-term strategy is geared towards decarbonization of its own operations and to support the European energy transition and security of supply. Climate-related risks and opportunities across the group are being concretely considered in the strategy process to inform the execution as well as a successful transition to a low carbon economy while enabling security of supply. Operations of Uniper's subsidiary Unipro in Russia, i.e. fossil based power generation, do not allow a full alignment to a science based 1.5 °C pathway as of today. However, Uniper has a defined specific targets on the European Generation business with an aim to reach carbon neutrality by 2035, and an interim target of 50% reduction by 2030 compared to 2019. The targets are steered in a progressive way to achieve a a timely transition. Additionally, Uniper's has a target to reduce its indirect Scope 3 emissions by 35% in 2035, compared to 2021. This ensures that Uniper looks at its emissions portfolio and climate relevant business activities holistically towards decarbonization, while ensuring a security of supply.

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
Transition scenarios: IEA SDS	Company-wide	<Not Applicable>	In order to validate the strategic direction and to ensure that the strategy is resilient under different longterm market developments, Uniper incorporates scenario analyses into its group-wide strategy process, including a strict global "well below 2°C" scenario. To quantitatively describe a global long-term transition towards a low-carbon energy system, Uniper chose one of IEA's publicly known and well-accepted long term energy scenarios: the Sustainable Development Scenario (SDS) from the World Energy Outlook 2020, which is aligned with the Paris Climate Agreement on a global scale. Below key assumptions of the IEA SDS WB2DS formed the basis of Uniper's scenario analysis for the strategy resilience test: 1. By 2030, Global power-and heat-related emissions will be down 40%*, while electricity demand would increase by 20%* in same time horizon. 2. By 2040, - Renewable share of European power generation will be at 75%, while the natural gas share will be at approx. 8%. - Globally, wind and solar will provide around 45% of total power generation. - Natural gas demand in Europe would decline by on average 3.3% p.a.*; globally, the decline would be at 0.6% p.a.*, while in the Asia-Pacific region demand would increase by 2% p.a.* - Global carbon prices increase to around €150-170/t 3. By 2050, Global share of low carbon gases will be at above 50%.
Physical climate scenarios: RCP 6.0	Company-wide	<Not Applicable>	Beside the SDS well 2°C-scenario, Uniper also considers a >3°C-scenario in its climate-related risk and opportunity assessment, to reflect the bandwidth in existing long-term scenario thinking. This >3°C-scenario is based on IEA's Current Policies Scenario (CPS) and the Intergovernmental Panel on Climate Change (IPCC) RCP6.0/RCP8.5 projections. The Current Policies Scenario (CPS) shows what happens if the world continues along its present path, without any additional changes in policy. In this scenario, energy demand rises by 1.3% each year to 2040, with increasing demand for energy services unrestrained by further efforts to improve efficiency. This growth would mean greater consumption of all fuels and result in a relentless upward march in energy-related emissions, as well as growing strains on almost all aspects of energy security. In this scenario, global oil demand rises by 1.1 mb/d on average every year to 2040, similar to the average increase seen since 2000. Growth is led by road transport, accounting for nearly half of the increase to 2040, and there are major increases in petrochemicals and aviation. Higher overall demand for energy pushes up natural gas consumption: demand for gas in this scenario increases by 2 trillion cubic metres (tcm) by 2040 globally, a level 50% higher than in 2018. The Current Policies Scenario, in which energy demand is stronger and policy pressure on coal is weaker, sees coal use rise in both areas industry and power generation. Electricity demand increases by 2.2% per year until 2040. Under current policies, fossil fuels continue to play a large role to 2040: coal-fired electricity generation still accounts for 30% of electricity supply and gas-fired generation for about 25%. Overall, power sector emissions rise by some 20% by 2040. Resulting total CO2 emissions are 18 to 54% higher by 2050 compared to 2010 or 55 to 102% compared to 1990. In the RCP6.0/RCP8.5 surface temperature is projected to increase by 3-4°C or higher over the 21st century. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent in many regions. The ocean will continue to warm and acidify, and global mean sea level is projected to rise further. Moreover, it is virtually certain that there will be more frequent hot and fewer cold temperature extremes over most land areas on daily and seasonal timescales, as global mean surface temperature increases

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

What are the developments expected by the IEA - SDS "well below 2°C"? How will the different business segments of Uniper i.e European power generation, Global commodities & Russian generation be affected by the underlying scenario? How compatible are the business specific transformation strategies with the "well below 2°C"? What are the potential financial impacts on key earning streams under the assumption of the "well below 2°C"?

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

In 2021, Uniper has used the aforementioned IEA SDS scenario to assess the resilience of its corporate strategy. The assessment will be updated regularly hereafter as part of its corporate strategy process. The quantitative scenario analysis focussed on Uniper's segments European Generation and Global Commodities, as those are more concretely affected by transition risks. The impacts on Uniper's third segment – Russian generation − have been analyzed only qualitatively. The time horizon for the resilience test extends to 2040. The results of the strategy resilience tests have been discussed with the Board of Management and the Supervisory Board, which is ultimately responsible for overseeing the effective execution of Uniper's strategy. The execution of a systematic strategy resilience test has shown that Uniper's corporate strategy is resilient towards even stricter global ambitions to limit temperature increase to "well below 2°C". Key results of the scenario analysis: 1. With an increasing share of fluctuating power generation from renewables in a "well below 2°C" scenario, the IEA projects that around 160 GW of installed gas-fired generation capacity will be needed in Europe by 2040. Today's installed gas-fired power generation capacity of approx. 180 GW in the EU would even increase to roughly 200 GW by 2030 in the SDS before declining again to 160 GW by 2040. This demonstrates the importance of natural gas for a reliable power generation system in Europe. With a highly efficient and flexible portfolio of around 9 GW gas-fired generation capacity in Europe, Uniper is perfectly equipped to benefit from security of supply requirements. Additionally, low-carbon energy solutions for third party customers, i.e. low-carbon steam and other commodities to industry contributes to enabling a successful energy transition. 2. Due to a number of hard-to-electrify processes, a full direct electrification of the energy supply is hardly possible. The "well below 2°C" scenario assumes that the share of green and low-carbon gases in the energy mix will increase to more than 50% by 2050. Uniper's approved hydrogen strategy, to produce, originate, and supply hydrogen to industry in its core markets, is thus perfectly in line with the "well below 2°C" scenario. 3. The successful development of Uniper's less carbon-intensive gas business can build upon its decade-long experience in importing, trading and supplying natural gas in Europe via pipelines and globally in form of LNG. Since IEA's "well below 2°C" scenario assumes a significant increase in natural gas demand in Asia-Pacific, mainly due to coal-to-gas switching to bring down carbon emissions in the power sector, Uniper could benefit from its flexible LNG portfolio.

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	Due to the shift in customer preference to lower carbon / climate friendly energy sources, Uniper will be impacted between 2020 and 2035 by having to develop new products and services aligned to this robust trend. These considerations have significantly impacted our strategy, leading to a strengthening of our sales business. A dedicated Net Zero Solutions department is now supporting B2B customers to gradually decarbonise their activities, by defining decarbonisation roadmaps, improving the energy efficiency of their facilities and offering an increasing portfolio of low-carbon energy products.
Supply chain and/or value chain	Yes	Climate risks in the supply chain / upstream value chain for eg. GHG emissions inc.l methane are increasingly in focus for midstream businesses such as Uniper's commodities portfolio. As such, in 2021 Uniper set itself a target to reduce its indirect Scope 3 emissions by 35% by 2035 compared to a baseline of 2021. Uniper strategy actively addresses the risks as well as opportunities for decarbonization of the upstream value chains.
Investment in R&D	Yes	For opportunities to be realized in new lower carbon / climate friendly technologies, Uniper plans investments up to 1.5 bn Euros, including R&D to maximize these opportunities. For example Uniper is working on further development of Green Hydrogen in Germany as well as low carbon synthetic fuels in Scandinavia. The impact of this is considered medium.
Operations	Yes	Due to the ongoing exit of coal-fired power plants and the growth of renewables across Europe, Uniper is impacted by lower load factors of it´s conventional plants as well as the closure of specific plants across it's European asset fleet. This will heavily impact the operations of such plants and the supporting infrastructure between 2020 and 2035, as technical arrangements will need to a) be made to decommission the plants in a safe and effective way; b) make the facilities available for ancillary and grid stabilisation services remunerated by TSOs; c) redevelop the sites for future-oriented activities, such as hydrogen production. Operation or construction of mid-sized CCGTs for capacity reserves might still be investigated, with focus on dual-fuel capabilities to ensure security of supply. The impact of this will be medium-high in the short-term, given the high capex required and the reserves needed for social security obligations towards our employees.

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	Capital expenditures Capital allocation	An internal carbon price is considered in the financial models for projects exposed to EU ETS compliance. Uniper also includes ESG considerations, in line with the EU Taxonomy on Sustainable Finance screening criteria, into our capital expenditures approval process (strategic and financial decision process). A lower hurdle rate is given as a reward for investments towards potentially EU-taxonomy eligible &/ aligned activities (clean technologies, lower-carbon solutions, etc), when also contributing to Uniper decarbonization ambitions.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Year target was set
2020

Target coverage
Country/region

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
23214560

Base year Scope 2 emissions covered by target (metric tons CO2e)
1029762

Base year 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)
24244322

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
54.2

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
96.6

Base year 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
54.6

Target year
2030

Targeted reduction from base year (%)
50

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
12122161

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
27759828

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
576702

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)
28336530

% of target achieved relative to base year [auto-calculated]
-33.7580733336243

Target status in reporting year
New

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain target coverage and identify any exclusions
The target covers European Generation and excludes Russian Generation.

Plan for achieving target, and progress made to the end of the reporting year
Due to a market driven shift of commodity prices, Uniper generation shifted unusually to coal driven generation in 2021. This trend is expected to reverse in the years to come and we expect therefore to get back to this committed decarbonization path affecting the European fleet and its strong correlation to the corporate strategy, under the assumption that the gas supply will return to agreed supply conditions.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 2

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 2: Capital goods
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 4: Upstream transportation and distribution
Category 11: Use of sold products

Base year
2021

Base year Scope 1 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 2 emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3 emissions covered by target (metric tons CO2e)
106286925

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
106286925

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
<Not Applicable>

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
<Not Applicable>

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
100

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
100

Target year
2035

Targeted reduction from base year (%)
35

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
69086501.25

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
106286925

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
106286925

% of target achieved relative to base year [auto-calculated]
0

Target status in reporting year
Underway

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain target coverage and identify any exclusions

The target covers all relevant categories of Scope III emissions. Based on relevance criteria following categories (GHGP) are excluded 10, 12, 13, 14 and 15.

Plan for achieving target, and progress made to the end of the reporting year
Uniper is discussing options for the decarbonization of Scope III emissions. Dedicated internal teams have been built for that purpose

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?
Net-zero target(s)

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Abs1

Target year for achieving net zero
2050

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions
Commitment involve all emission scopes of the company. No relevant exclusions considered.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?
Unsure

Planned milestones and/or near-term investments for neutralization at target year
<Not Applicable>

Planned actions to mitigate emissions beyond your value chain (optional)
Uniper is currently assessing all options to mitigate emissions, including prevention and mitigation measures, CCS, CCU and Offsetting in order to reach Carbon Neutrality in 2050

Target reference number
NZ2

Target coverage
Country/region

Absolute/intensity emission target(s) linked to this net-zero target
Abs2

Target year for achieving net zero
2035

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions
This target covers European Generation and excludes therefore assets located in the Russian Federation

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?
Unsure

Planned milestones and/or near-term investments for neutralization at target year
<Not Applicable>

Planned actions to mitigate emissions beyond your value chain (optional)
Uniper is currently assessing all options to mitigate emissions, including CCS, CCU and Offsetting in order to reach Carbon Neutrality in 2050

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	25	756840
To be implemented*	1	1300
Implementation commenced*	1	
Implemented*	3	95730
Not to be implemented	2	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
88000

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)
10500000

Investment required (unit currency – as specified in C0.4)
800000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Datteln 4 (Germany): By retrofitting drives on all burner swirl flap cabinets and integrating them directly into the main control system, the combustion swirl could be adjusted automatically depending on the coal quality (e.g. the volatile components) via the linkage located outside the burner. Same efficiency despite burning lower coal qualities leads to considerable savings in two main areas: Coal consumption reduction and CO2 emission reductions. Project completed in 2021.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
7600

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)
191000

Investment required (unit currency – as specified in C0.4)
62000

Payback period
1-3 years

Estimated lifetime of the initiative
16-20 years

Comment
Gönyü (Hungary): Utilising existing anti-icing system to improve efficiency at part load operation. The project determined the operating conditions (load, ambient) at which the air-inlet heating could be used to improve the plant efficiency. Based on project results, predicted CO2 savings of 7,600t/year. Project completed in 2021.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
130

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)
202000

Investment required (unit currency – as specified in C0.4)
15000

Payback period
1-3 years

Estimated lifetime of the initiative
16-20 years

Comment
Franken 1 (Germany): Root cause analysis of combustion instabilities, particularly during start up. These require significant intervention from the operators to manage the risk of power reduction, exceeding emissions and unit trips. Recommendations for improvements. Estimated CO2 saving ~130t/year, Project completed in 2021.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for low-carbon product R&D	Uniper devotes an annual innovation budget with the primary goal to develop new scalable business models which contribute substantially to CO2 reduction in the energy sector as well as in mobility and industry. A significant part of the budget is dedicated to boost progress in a handful of key strategic innovation areas. Three of those with the biggest endowment of budget and staff are “CO2 recycling and Biomass-to-X”, “Power & New Flexibility” and “Smart & Green Heat”, all being devoted to integrate, with new technologies, renewable power into the existing energy system or to increase efficiency.
Partnering with governments on technology development	Uniper has applied for several public funding schemes to support the development of new technology for hydrogen manufacturing and usage. The most relevant scheme is given by the Important Projects of Common European Interest (IPCEI).
Compliance with regulatory requirements/standards	EU ETS compliance drives emission reduction activities at Uniper, as the EUA price increases. The EUA price outlook allows the prioritization of asset upgrades.
Compliance with regulatory requirements/standards	The mechanisms introduced by the German Greenhouse Gas Reduction Quota Act will allow the development of Upstream Emission Reduction initiatives and the trading of emission reduction certificates.
Dedicated budget for low-carbon product R&D	CO2 recycling or CO2 utilization, i.e. converting captured CO2 to valuable and sustainable products such as (amongst others) synthetic chemicals or fuels can contribute to reducing CO2 emissions, especially in hard-to-electrify sectors. We see CO2 utilization as key for reaching climate neutrality, as the global economy will continue to depend on the chemical element carbon, which can, unlike today, not originate anymore from fossils. CO2 recycling is one of the few possibilities to satisfy the need for carbon in a climate neutral way. We believe that Uniper has a chance to build up capabilities in CO2 recycling, owing to the experience we have in capturing CO2 at our power plants and by supplying it to greenhouses, for example. We intend to build on this experience and will continue to expand our know-how in the field of CO2 conversion to create high-quality products, chemicals and fuel with the ultimate goal to develop viable and scalable business models in this field. Technical feasibility is an important issue – one we are working on intensively. Of equal importance, however, is the need to eliminate the legal and regulatory barriers to large-scale deployment of these new technologies. We devote our budget in the field of CO2 recycling to the development of pilot projects, with the goal to build up capabilities along the value chain. In addition, we realize the need for assessing the local demands and opportunities to establish a CO2 based infrastructure feeding into and supporting existing industries.
Dedicated budget for energy efficiency	Another key area from our Innovation Agenda is “Power & New flexibility“. It focuses on innovative flexibility technologies for the power grid – power-to-gas for sector coupling is one element of this activity that addresses also the low-carbon hydrogen market. Another key element is battery storage for peaking and peak shaving capacity and the integration of renewable energy systems enabling the energy transition. Besides, we focus on virtual power plant solutions and business models. Another key flexibility topic are ancillary grid services to enable higher share of intermittent renewables in the power grid. Since 2017, we have successfully marketed the flexibility of M5BAT, which is a hybrid of different battery technologies that optimally combines storage capacities for periods of seconds, minutes or hours, whereby the storage system is designed for a total storage capacity of around 5 megawatt hours (MWh).
Dedicated budget for energy efficiency	Almost half of the primary energy is used for the heat supply of households and industry and thus a critical field of action for a decarbonization of the energy industry. Therefore “Smart & Green Heat” is the third key area on our Innovation Agenda, which focuses on decarbonising the heat sector and Uniper’s existing heat businesses. We are searching, developing and implementing solutions to increase the efficiency of the existing heat systems as well as to replace old technologies by new, more efficient and sustainable technologies. This includes for example an optimized control of our district heating systems based on AI tools or the realization of 5th generation heating grids.
Dedicated budget for low-carbon product R&D	Green and low carbon Hydrogen is a key pillar in Uniper 2030 strategy. A dedicated Hydrogen Unit consisting of a joint Uniper / Fortum team develops large scale asset based business models with focus Germany, UK, Netherlands, Nordics. In addition Uniper is active in global sourcing of hydrogen. Decarbonization is the most important driver for long-term scalable hydrogen business, but there are also short-term drivers such as local emission reduction, security of supply, diversification, system optimization and technology switch. Being pioneers in hydrogen since 2013 with our two hydrogen production installations in Falkenhagen and Reitbrook, Germany we investigate, where hydrogen could play already today a relevant role, to support and develop the sustainable hydrogen market to take off. The uptake of the market depends mainly on political agenda. e.g. the urgent implementation of a Guarantees of Origin scheme, and technology costs
Financial optimization calculations	Uniper includes ESG considerations, in line with the EU Taxonomy on Sustainable Finance screening criteria, into our capital expenditures approval process (strategic and financial decision process). A slightly lower hurdle rate is given as a reward for investments towards Taxonomy eligible activities (clean technologies, lower-carbon solutions, etc) that also contribute to Uniper's decarbonization ambitions. The lower hurdle rate is awarded in the financial decision (FD) stage after a successful strategic decision (SD) where ESG and climate-related considerations are included.
Other (Partnering with other companies on technology development: Making net zero possible initiative)	Uniper's Making Net Zero Possible (MNZP) project is leading the decarbonization of the European Gas Turbine Fleet, in line with the Uniper Strategy for European Generation to become carbon neutral by 2035. The first phase of MNZP has reviewed the technology options, the socio-economic and political landscape for the countries where Uniper has assets and performed a SWOT analysis of the Gas Turbine fleet to identify suitable assets for initial pilot activities. Three focus areas have been identified which offer credible routes to decarbonization: Hydrogen, post combustion Carbon Capture, Utilization and Storage (CCUS) and Biofuels. For each topic, a Roadmap has been developed to describe the next ‘no regret’ activities for Uniper to pursue and individual work streams should be established for each topic to tackle the specific challenges and opportunities associated with each one.

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
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Power	Hydropower

Description of product(s) or service(s)
Uniper sells electricity generated in owned hydropower facilities in Germany and Sweden.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
13

Level of aggregation
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Power	Other, please specify (Nuclear Power)

Description of product(s) or service(s)
Uniper power plant Oskarshamn (OKG) located in Sweden.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
13

Level of aggregation
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Other	Other, please specify (GOOs)

Description of product(s) or service(s)
Uniper trades Guarantees of Origin (GOOs) from its hydropower units located in Sweden and Germany.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
0

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

The efforts to reduce methane emissions from Uniper business activities are:

1. CH4 Leak Detection and Repair, Venting minimization at Uniper Gas Storage sites.

1. CH4 Leak Detection and Repair, Venting minimization at Uniper Gas Storage sites.

Natural Gas releases into the atmosphere as losses due to storage, pumping and venting activities are inherent to the natural gas storage business. Undertaking the best efforts to minimize those releases is in Uniper´s interest. Methane releases can be classified into leaks, and process related releases for pipeline maintenance, repair or exchange measures. Leaks are repaired as soon as they are identified and leaked volumes can be only roughly estimated through mass balance. Since September 2020 Uniper is member of the Oil and Gas Methane Partnership 2.0, which aims at reducing methane emissions by 45% at industry level before 2025. Represented by our Gas Storage business, a specific target has been set up in relation to methane emissions. In 2021 this target has been overachieved.

Realized projects/ measures (2021 update):

- *Flaring of emissions from labyrinth seals of compressor units (ESE) in operation*
- *Definition of closed relief areas to minimize vent gas (Epe 2017, Bierwang, implemented 2016):*
- *Access points in process piping (Bierwang, implemented 2017) → possibility to route gas to CHP that is not directly connected concept study in progress*
- *Compressed air or nitrogen as replacement for methane actuator gas (Bierwang, implemented 2017) Most of the actuators were replaced, still ongoing*
- *Losses from planned maintenance measures are flared (ESE) in operation*
- *Mobile GDRM to route high to low pressure gas usage (Epe) implemented in 2021*

Upcoming projects/ measures

- *Set up of a mobile recompression system for planned maintenance measures (one mobile compressor for region north, one for region south, one for Holford) concept study in progress*
- *Exchange of gas starting systems on the last two engines in BW (compressed air/electrical/hydraulic) replaced from 2023*
- *Exchange of pony turbos of ME01 & 02 (gas driven à air driven) concept study done, replaced from 2023*
- *Ongoing studies on flash gas tanks to reduce flash gas emissions*
- *Ongoing studies on leakage detection systems (detection by drones, cars, cameras etc.)*
- *Reduce emission from gas analysers in Epe from 2022 and ESE from 2024*
- *Reduce emission from gas analysers in BB from 2025*
- *Reduce emission from gas analysers in Holford from 2026*
- *Amending the discharging groups in Bierwang in 2022*
- *Change of drying units on well pads in Bierwang in 2022*

2. Identification of CH4 emissions from incomplete combustion in our gas-fired assets

This category corresponds to the residual methane released from the combustion of fuels and is calculated in Uniper's Carbon Footprint by multiplication of the fuel amounts by a valid (Greenhouse Gas Protocol) and updated fuel specific emission factor. Uniper´s business interest is to maximize the combustion efficiency as much as possible, nonetheless nothing can be technically done to reduce CH4 emissions of this residual amounts of CH4.

Example: The combustion of 136.112.980 **m3 of Natural gas in our Maasvlakte plant in the Netherlands generated** 242.970 **t CO2. This combustion releases marginal amounts of CH4 and N2O. In the case of CH4, the ratio of CO2 eq from CH4 and the emitted CO2 is 0.00137, which means that for each ton of CO2 released 0.00137t COeq must be added due to the effect of releasing CH4. Similar assessments have been commenced for the other Uniper gas-fired assets part of our European Generation segment in order to determine these residual volumes more precisely in the future.**

3. Supplier engagement to identify and reduce CH4 emissions from coal extraction

Uniper is active member of Bettercoal, a non-profit organization aimed at improving the environmental, social and governance-related performance of the global coal value chain. Chapter 9.3 of the Bettercoal Code refers to requirements to coal mining companies regarding emissions to air, including specific requirements to greenhouse gases. Quantification under recognized national standards, internationally recognized methodologies and good practices are part of these requirements, as well as procedures to minimize fugitive emissions from tailing facilities, waste dumps, stockpiles and other exposed areas.

4. Supplier engagement to identify and reduce CH4 emissions on natural gas and LNG supply chains

GHG emission transparency related to the supply chain of natural gas and LNG is a relevant topic. First LNG shipments including climate relevant information are being requested by customers and offered by LNG suppliers. In ***2021*** there were further developments to identify supply chain accounting approaches. Dedicated databases have been set up to assess the GHG footprint of Uniper purchased gas and LNG.

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 divestment

Name of organization(s) acquired, divested from, or merged with

Uniper share in Schkopau lignite power plant (916MW of installed capacity) was sold to Saale Energie

Details of structural change(s), including completion dates

Shares was sold to Saale Energie on October 1, 2021, where operational control was also transferred.

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 boundary	Scope III emission boundary was increased due to availability of (calculated) emission factors for Category 3.4 (mainly EF for Pipeline Gas in USA and the EU) and a wider boundary of Category 3.11 (now including sales to resellers in addition to end-users), both impacting the Scope III emission accounting significantly if compared to the previous year.

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because the impact does not meet our significance threshold	Changes of emissions within the base year which are bigger than 10% of the base years emissions covered by the target, require a recalculation. For Uniper´s Scope 1/2 Emissions target (the only existing target in 2021) , the GHG of the divested asset was 3,773 million tons out of 49,255, so less than 10% and therefore there was no need to recalculate. For Scope III target, 2021 was defined as the base year for the companies Scope III target.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

23214560

Comment

Base year emissions do not include emissions from Russian Federation .

Scope 2 (location-based)

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

1029762

Comment

Base year emissions do not include emissions from Russian Federation .

Scope 2 (market-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
1477273

Comment
Base year emissions do not include emissions from Russian Federation .

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)
460926

Comment
During 2021, Uniper conducted an in-depth review and subsequent revision of the Scope III emissions inventory. The aim was to ensure that the inventory accurately reflects Uniper´s evolving value chain activities and offers full transparency of its emissions. Where possible, Scope III accounting methodologies were aligned with those of Fortum. As part of the review, the Scope III.11 was expanded to include not only emissions from the sales to end users but also from the sales to resellers. As part of Uniper business as an energy merchant, we purchase products, such as gas and coal, and sell them to final users and resellers. Resellers are counterparties who offtake the product and sell it further downstream.

Scope 3 category 2: Capital goods

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
173945

Comment
2020 was the first year where Scope III emissions were broken down in a Sustainability Report according to the classification criteria of the GHGP. Due to the size and complexity of Uniper operations, the accounting process has consolidated and the emission accounting of several relevant Scope III categories has improved in regard to completeness and boundary since the initial accounting cycle. For that reason, Uniper has chosen 2021 as a base year for its Scope III target (35% reductions by 2035).

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)
10524059

Comment
2020 was the first year where Scope III emissions were broken down in a Sustainability Report according to the classification criteria of the GHGP. Due to the size and complexity of Uniper operations, the accounting process has consolidated and the emission accounting of several relevant Scope III categories has improved in regard to completeness and boundary since the initial accounting cycle. For that reason, Uniper has chosen 2021 as a base year for its Scope III target (35% reductions by 2035).

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
16935277

Comment
2020 was the first year where Scope III emissions were broken down in a Sustainability Report according to the classification criteria of the GHGP. Due to the size and complexity of Uniper operations, the accounting process has consolidated and the emission accounting of several relevant Scope III categories has improved in regard to completeness and boundary since the initial accounting cycle. For that reason, Uniper has chosen 2021 as a base year for its Scope III target (35% reductions by 2035).

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
10629

Comment
Emissions under category 3.5 were calculated for the first time in 2021. They do not represent high relevance in the overall Scope III balance of the company.

Scope 3 category 6: Business travel

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
270

Comment
2019 was the first year where business travel emissions were calculated by the travel agency using DEFRA EFs. 2020 emissions of this category were not representative due to a significant drop (89%) due to the Corona pandemic.

Scope 3 category 7: Employee commuting

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
3723

Comment
Uniper started to report category 7 in 2020. Due to massive home working during the pandemic, commuting-related emissions have been significantly below expected levels under normal operational conditions. Due to data protection, the calculation has been made with assumptions (average distance between working place and home, car size, emission factor, car occupancy, yearly working days).

Scope 3 category 8: Upstream leased assets

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
56912

Comment
This category was published for the first time in 2020, after emission allocation adjustments were done, specifically in regard to the re-allocation of emissions from leased vessels for LNG transportation, which finally were put under Scope I, due to the direct control the company has over these emissions (fuel quality, route selection).

Scope 3 category 9: Downstream transportation and distribution

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
54635

Comment
Transportation of gypsum (Baumineral gypsum trading in Germany) and VLSFO (Fujairah refinery and marine fuels operations in Dubai) are under this category.

Scope 3 category 10: Processing of sold products

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
140909

Comment
Estimated based on gypsum volumes actually produced and different emission factors of the gypsum processing industry (Forschungsverein der Gipsindustrie, Athenea Sustainable Materials Institute, and The Gypsum Board Manufacturers of Australia), in agreement with Fortum. Not verified.

Scope 3 category 11: Use of sold products

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
78077179

Comment
The first calculations of this category were done back in 2018 but published for the first time in 2020. Calculation methodology changed, as sales to resellers were included in 2021 accounting, significantly impacting the reported volumes. Not including resellers before was due to an unclear definition of the category in the GHGP and the fact that other companies in the sector published emissions related to sales to end users only.

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not relevant for Uniper

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not relevant for Uniper

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not relevant for Uniper

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Not relevant for Uniper

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
NA

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
NA

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
Other, please specify (Russian Federation Methodology for GHG Accounting)

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)
51212402

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
This emissions correspond to total Scope I emissions from following under-categories: - 1.1. Combustion of fossil fuels in stationary assets (including emissions covered by the EU ETS, as well as CH4 and N2O from Fossil Fuel combustion processes). Emission factors are calculated according to EU ETS rules or directly taken from DEFRA. - 1.2. Volatile gases, which are calculated by multiplying actual or estimated volumes of released GHG gases, using GWP from latest IPCC Reports - 1.3. Other minor internal processes not included in 1.1. Volumes of fuels are multiplied by the corresponding emission factor (DEFRA) - 1.4. Mobility: multiplication of mobility related fuel volumes consumed by the corresponding emission factor (DEFRA)

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
To know the relationship between the two approaches and considering the availability of emission factors for both calculations, Uniper has decided to calculate scope 2 emissions under both approaches using the national grid emission factors and the residual mix emission factors made available by the Association of Issuing Bodies (AIB), taking into consideration that no significant amount of certified low carbon energy was purchased. Regarding the calculation of the location-based emissions of Germany, UK and the Russian Federation, emission factors published by each government were used. For other countries, production mix emission factors published by AIB are used. As the AIB does not provide any emission factors for the Russian Federation, only location-based scope 2 emissions are calculated for this country.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
596924

Scope 2, market-based (if applicable)
799391

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
For the emission from the Russian assets, location based method was the only accounting method applied (no EF for Residual Mix available for Russia)

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

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)
460926

Emissions calculation methodology
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Uniper uses procurement spent figures (in Euro) to calculate the Scope 3.1 emissions (Goods and Services). Emission factors from Exiobase have been used for the first time in 2021, after a process alignment with Fortum .

Capital goods

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
173945

Emissions calculation methodology
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Uniper uses procurement spent figures to calculate the Scope 3.2 emissions (Capital Goods) . Emission factors from Exiobase have been used for the first time in 2021, after a process alignment with Fortum .

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
10524059

Emissions calculation methodology
Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
This category has by definition of the GHGP 4 under-categories (a,b,c,d). Category a corresponds to Upstream emissions from own consumed energy and is the most significant contribution to Scope 3.3 in Uniper (96%). The emission factors for this under-category are recognized and are fuel specific. Uniper and Fortum agreed on a common methodology for this calculation, which was in hands of an external consultant. For the rest of the under-categories, Scope 2 emissions figures (b,c) and actual purchased and resold volumes of heat and electricity were used in combination with DEFRA and AGORA emission factors.

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
16935277

Emissions calculation methodology
Fuel-based method
Other, please specify (Mobilized goods in combination with own calculated EFs)

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain
The calculations were done using different methods: for upstream transportation of fuel oil, Uniper used the Fuel Based approach, for LNG transportation, a external model from Woodmack was used, whereas for NG transportation in USA and the EU, specific transportation emission factors were calculated based on recognized studies (EPA, BDI). For coal volumes the emission factor used was from DEFRA.

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
10630

Emissions calculation methodology
Fuel-based method
Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Emissions came from solid waste as well as from non-condensabel gases in UAE. For solid waste, the waste-type-specific method was used. In the case of non-condensable gases, a gas specific emission factor was used.

Business travel

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
270

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The travelling activities were significantly reduced in 2021 due to the Corona crisis.

Employee commuting

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
3723

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
FTE figure was multiplied by a commuting emission factor from VVT (agreed with Fortum for consistency reasons), under some assumptions of average distance, average car size and yearly working days.

Upstream leased assets

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
56912

Emissions calculation methodology
Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Fuel volumes consumed by vessels leased by Uniper for the transportation of fuels to be processed

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
54635

Emissions calculation methodology
Fuel-based method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
VLSFO consumed as shipping fuel for the distribution of products (fuel based) and emissions from the transportation of gypsum from coal assets to customers (distance based)

Processing of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
140909

Emissions calculation methodology
Other, please specify (Specific EF for gypsum processing)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Volumes of gypsum sold were multiplied by an average of the emissions factor from several sources: The Gypsum Board Manufacturers of Australia, Athena Sustainable Material Institute, Forschungsvereinigung der Gipsindustrie.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
78077179

Emissions calculation methodology
Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Calculation was made differentiation between End Users and Resellers (Figure is to sum of both) via multiplication of sold fuel type times the corresponding combustion emission factor from DEFRA, except the calculation of 3.11 emission from LNG sales, for which another methodology has been used (Woodmack Software for Shipping Emissions).

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
Uniper does not sell products which could generate end of life emissions. All the combustion related emission are included under the 3.11 category

Downstream 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
Uniper does not lease assets as a lessor

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
Uniper does not use the franchising business model.

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
There are no investments that generated relevant emissions under Scope 3 Category 15 in 2021

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
Uniper did not identify additional emissions to the ones already mentioned

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
Uniper did not identify additional emissions to the ones already mentioned

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	1019908	Emissions from : - Wood Pellets used in Maasvlakte Power Plant in the Netherlands - Combustion of Biopropane in Maasvlakte in the Netherlands - Meat and Bone Meal combusted in Maasvlakte in the Netherlands - Sludge from Municipal Water Treatment in Wilhelmshaven and Staudinger in Germany

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
0.00032

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
51809326

Metric denominator
unit total revenue

Metric denominator: Unit total
163979000000

Scope 2 figure used
Location-based

% change from previous year
57

Direction of change
Decreased

Reason for change
The significant decrease in intensity in regard to last year resulted primarily from the higher revenue linked to average market prices in the power and gas business. Aside from higher own-use contract prices and spot-market transactions, a significant portion of this increase is attributable to the contracts involving physical settlement that Uniper enters into (failed own-use contracts), which are presented at the spot price applicable on the settlement date applying the recognition and measurement rules codified in IFRS-rather than at the originally hedged contract price .The sharp rise in commodity spot prices has thus brought about a shift in the presentation of realized income and cost of materials to other operating income and expenses, but it has no effect on contractual cashflows and thereof no impact on adjusted EBIT. Alongside the significant price effect, slightly higher gas sales volumes and electricity generation volumes also had a positive impact on sales development, while electricity sales volumes in the optimization and trading business declined significantly. In addition, there are general macroeconomic, political and sectoral developments as well as sometimes extreme and cool weather conditions which influence the revenue. Source: Uniper Annual Report 2021.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	50918711	IPCC Sixth Assessment Report (AR6 - 100 year)
CH4	101946	IPCC Sixth Assessment Report (AR6 - 100 year)
N2O	191342	IPCC Sixth Assessment Report (AR6 - 100 year)
SF6	103.4	IPCC Sixth Assessment Report (AR6 - 100 year)
HFCs	299.2	IPCC Sixth Assessment Report (AR6 - 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	601.4	0	16839.2	Released CH4 (t) from UST and Uniper UK assets
Combustion (Electric utilities)	51179721	0	0.005	51179841	Emissions include intrinsic CH4 and N2O releases from combustion processes
Combustion (Gas utilities)	0	0	0	0	Not applicable
Combustion (Other)	8278	0	0	8278	Gas combustion in buildings
Emissions not elsewhere classified	7454.23	0	0	7454.23	Includes: - Other non listed volatile emissions (Refrigerants, etc) - Mobile devices (fuel consumption)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Germany	13744782
Russian Federation	23452583
United Kingdom of Great Britain and Northern Ireland	8611180
Netherlands	4425125
Sweden	98301
Hungary	832420
United Arab Emirates	48011

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Uniper Kraftwerke GmbH	13731977
Uniper UK Ltd	8611180
Sydkraft Thermal Power AB	97263
Sydkraft Hydro Power AB	0
Uniper Benelux NV	4425125
Uniper Hungary Elektrikai Kft.	832420
OKG	1038
Unipro	23452583
Uniper Energy Storage GmbH	10904
Uniper Waerme GmbH	1901
Uniper UAE	48011

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	51212402	<Not Applicable>	No comments.
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

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	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change		
Other emissions reduction activities		<Not Applicable>		
Divestment	2970475	Decreased		In October 2021 lignite Schkopau power plant was divested. Decreased Volumes are approximate (base: 2020).
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	7900000	Increased		Production of electricity in owned assed increased significantly in 2021 with respect to 2020 (110.7 Gwh vs 95.2 GWh). Value is approximate
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions	590000	Increased		The secondary drivers for the increased emission volumes in 2021 over 2020 were: - High commodity (particularly gas) price volatility of commodities, resulted in a shift towards relative higher coal generation in 2021 with respect to 2020. - first full year operation of the new coal-fired power plant Datteln 4 (started in May 2020). Value is approximate.
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

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?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 35% but less than or equal to 40%

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	No
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)	3121808	238458910	241580718
Consumption of purchased or acquired electricity	<Not Applicable>	0	1628741.23	1628741.23
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
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>	406360.5	<Not Applicable>	406360.5
Total energy consumption	<Not Applicable>	3528168.5	240087651.23	243615819.73

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	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value
LHV

Total fuel MWh consumed by the organization
3118446.11

MWh fuel consumed for self-generation of electricity
2519267

MWh fuel consumed for self-generation of heat
101623

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
497556.11

Comment
All forest biomass (biogas, agroforestry and forest biomass) at Uniper is certified for its sustainable sourcing.

Other biomass

Heating value
LHV

Total fuel MWh consumed by the organization
3358

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
3358

Comment
Active Sludge from Municipal Sewage Treatment Plants burned in trigeneration of electricity, heat and steam at Staudinger Block 5 and Wilhelmshaven

Other renewable fuels (e.g. renewable hydrogen)

Heating value
Please select

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment

Coal

Heating value
LHV

Total fuel MWh consumed by the organization
46670232.54

MWh fuel consumed for self-generation of electricity
13522626.71

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
33147605.83

Comment

Oil

Heating value
LHV

Total fuel MWh consumed by the organization
521982.18

MWh fuel consumed for self-generation of electricity
446305.55

MWh fuel consumed for self-generation of heat
21721

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
53955.63

Comment
Diesel and Fuel oil

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
139914420

MWh fuel consumed for self-generation of electricity
48471806.2

MWh fuel consumed for self-generation of heat
103235.91

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
90946224.1

Comment
419752.23 MWh consumed for purposes not mentioned on the list. Includes both Natural Gas and LPG.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
51325680.61

MWh fuel consumed for self-generation of electricity
31424700

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
19900980.61

Comment
of which 31424700.00 MWh accounted for nuclear fuel, 19900980.61 accounted for lignite

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
241580717.89

MWh fuel consumed for self-generation of electricity
93865438.47

MWh fuel consumed for self-generation of heat
124956.91

MWh fuel consumed for self-generation of steam
147170570.28

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
419752.23 MWh of fuel accounted for natural gas for other purposes

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)
6231

Gross electricity generation (GWh)
19155

Net electricity generation (GWh)
18597

Absolute scope 1 emissions (metric tons CO2e)
16247409

Scope 1 emissions intensity (metric tons CO2e per GWh)
830

Comment
In the case of the CHP plants electricity equivalents from heat were included for the calculation of the intensity. The scope 1 emission intensity = Absolute scope 1 emissions / Net generation of electricity and heat

Lignite

Nameplate capacity (MW)
2300

Gross electricity generation (GWh)
6882

Net electricity generation (GWh)
6681

Absolute scope 1 emissions (metric tons CO2e)
7019698

Scope 1 emissions intensity (metric tons CO2e per GWh)
1003

Comment
The scope 1 emission intensity = Absolute scope 1 emissions / Net generation of electricity and heat

Oil

Nameplate capacity (MW)
2814

Gross electricity generation (GWh)
223

Net electricity generation (GWh)
217

Absolute scope 1 emissions (metric tons CO2e)
131571

Scope 1 emissions intensity (metric tons CO2e per GWh)
883

Comment
The scope 1 emission intensity = Absolute scope 1 emissions / Net generation of electricity and heat

Gas

Nameplate capacity (MW)
16993

Gross electricity generation (GWh)
62416

Net electricity generation (GWh)
60598

Absolute scope 1 emissions (metric tons CO2e)
27385921

Scope 1 emissions intensity (metric tons CO2e per GWh)
448

Comment
The scope 1 emission intensity = Absolute scope 1 emissions / Net generation of electricity and heat

Sustainable biomass

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment
Sustainable biomass counted together with coal burning. The scope 1 emission intensity = Absolute scope 1 emissions / Net generation of electricity and heat

Other biomass

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Waste (non-biomass)

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Nuclear

Nameplate capacity (MW)
1400

Gross electricity generation (GWh)
11319

Net electricity generation (GWh)
10989.43

Absolute scope 1 emissions (metric tons CO2e)
724

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Geothermal

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Hydropower

Nameplate capacity (MW)
3561

Gross electricity generation (GWh)
13533

Net electricity generation (GWh)
13139

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Wind

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Solar

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Marine

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Other renewable

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Other non-renewable

Nameplate capacity (MW)

Gross electricity generation (GWh)
185

Net electricity generation (GWh)
179

Absolute scope 1 emissions (metric tons CO2e)
47823

Scope 1 emissions intensity (metric tons CO2e per GWh)
754

Comment
1130 tons CO2 are for diesel fuel with corresponding intensity of 754 mt CO2 / GWh; Rest (46693) are for naphtha. The scope 1 emission intensity = Absolute scope 1 emissions / Net generation of electricity and heat

Total

Nameplate capacity (MW)
33298

Gross electricity generation (GWh)
113713

Net electricity generation (GWh)
110401

Absolute scope 1 emissions (metric tons CO2e)
50833146

Scope 1 emissions intensity (metric tons CO2e per GWh)
456.71

Comment
The total scope 1 emission intensity = Total absolute scope 1 emissions / Total net generation of electricity and heat

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
Germany

Consumption of electricity (MWh)
976271.07

Consumption of heat, steam, and cooling (MWh)
24131.3

Total non-fuel energy consumption (MWh) [Auto-calculated]
1000402.37

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)
140501.99

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
140501.99

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Sweden

Consumption of electricity (MWh)
67993.1

Consumption of heat, steam, and cooling (MWh)
471

Total non-fuel energy consumption (MWh) [Auto-calculated]
68464.1

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Netherlands

Consumption of electricity (MWh)
378412.05

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
378412.05

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Hungary

Consumption of electricity (MWh)
989.12

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
989.12

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Russian Federation

Consumption of electricity (MWh)
64402.09

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
64402.09

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
United Arab Emirates

Consumption of electricity (MWh)
171.79

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
171.79

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?
No

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description
Other, please specify

Metric value

Metric numerator

Metric denominator (intensity metric only)

% change from previous year

Direction of change
<Not Applicable>

Please explain

C-EU9.5a

(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

Coal – hard

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
22049461

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
3.76

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
6.02

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Lignite

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
10645846

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
1.81

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
3.44

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Oil

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
3876270

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0.66

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0.32

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Gas

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
421654613

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
71.82

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
58.42

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Sustainable biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Other biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
1790000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0.3

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0.15

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Waste (non-biomass)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Nuclear

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
41513343

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
7.07

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
9.67

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Geothermal

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Hydropower

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
85089679

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
14.49

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
21.91

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Wind

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
237527

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0.04

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0.03

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Solar

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
237527

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0.04

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0.03

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Marine

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Fossil-fuel plants fitted with CCS

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Other renewable (e.g. renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

Other non-renewable (e.g. non-renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

CAPEX planning period includes only 3 years: 2022 - 2024 (growth & maintenance CAPEX)

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Other, please specify (Product & Services)	No product & service clustering available	0	0	2024

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	The transition to a low carbon economy cannot be faced effectively without proactive efforts to adapt the business to the changing market to assure business continuity. Even though Uniper has not an own R&D department, the Innovation Department has the task to identify, assess and propose for financing, participation and scaling up of R&D prospects from and together third parties which are considered to be good opportunities for scalable business. This mechanism has demonstrated to be aligned with Uniper's expectations on empowering initiatives with market potential. Alternative fuels, CO2 recycling, innovative flexibility & storage solutions for integrating renewable power into the grid, smart and sustainable heat applications and other climate related initiatives are not only included but are a the focus of Uniper's Innovation Department.

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Renewable energy	Applied research and development	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Carbon capture and storage/utilisation	Applied research and development	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Other, please specify (Advanced Fluids)	Applied research and development	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Distributed energy resources	Applied research and development	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Other, please specify (Hydrogen)	Pilot demonstration	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Energy storage	Pilot demonstration	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Other, please specify (Innovative flexibility & storage technologies for the power grid)	Applied research and development	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Other, please specify (Innovative efficiency measures in the heat sector, focused on Unipers existing heat business)	Pilot demonstration	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Demand side response programs	Applied research and development	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Digital technology	Applied research and development	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.
Other, please specify (Combustion optimization and modification)	Applied research and development	61-80%		61-80 & represents R&D investment share for total investment in low carbon R&D; Specific technology-area related figures can't be delivered as costs are tracked for early development stages not on individual level.

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
Uniper SE_PwC Practitioners Report_NfR 2021_EN.pdf

Page/ section reference
Page 5 of the Independent Practiotioners Report (PWC) and pages 109 - 111 of the Combined Non -Financial Report (both in one document)

Relevant standard
ASAE3000

Proportion of reported emissions verified (%)
99

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
UniperSEPwCPractitionersReportNfR2021EN.pdf

Page/ section reference
Page 5 of the Independent Practiotioners Report (PWC) and pages 109 - 111 of the Combined Non -Financial Report (both in one document)

Relevant standard
ASAE3000

Proportion of reported emissions verified (%)
100

Scope 2 approach
Scope 2 market-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
UniperSEPwCPractitionersReportNfR2021EN (1).pdf

Page/ section reference
Page 5 of the Independent Practiotioners Report (PWC) and pages 109 - 111 of the Combined Non -Financial Report (both in one document) Comment: Location approach volume was considered for Russian Scope II Market Approach as no Residual Mix Emission Factor was available for the country.

Relevant standard
ASAE3000

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
Scope 3: Capital goods
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Upstream transportation and distribution
Scope 3: Business travel
Scope 3: Employee commuting
Scope 3: Upstream leased assets
Scope 3: Downstream transportation and distribution
Scope 3: Use of sold products

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
UniperSEPwCPractitionersReportNfR2021EN (2).pdf

Page/section reference
Page 5 of the Independent Practitioners Report (PWC) and pages 109 - 111 of the Combined Non -Financial Report (both in one document)

Relevant standard
ASAE3000

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
C6. Emissions data	Other, please specify (Second verification of same data (Scope I,II and III) by a second independent entity)	ISAE 3410	As a result of Uniper´s acquisition by Fortum and to ensure Uniper´s freedom to decide which external auditors , it was agreed that Uniper´s emission data (Scopes I, II and III) would be verified by PWC and the outcome would be recognized by Deloitte , which audits Fortum. Please see pages 39 and 102 of the 2021 Sustainability Report of Fortum (attached). Therefore Uniper emission data were verified two independent entities. fortum_sustainability2021.pdf
Please select	Please select		

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.
EU ETS
UK carbon price floor
UK ETS
Other ETS, please specify (Russian Federation GHG Accounting Methodology)

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS
37

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
273759

Allowances purchased
18648772

Verified Scope 1 emissions in metric tons CO2e
18922531

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
Verification of above Scope 1 emissions corresponds to ETS verification only (excluding emissions from Russia and UK assets. All Scope 2 emissions were also verified but not under the ETS. For this reason the value for Scope 2 under the ETS is 0.

UK ETS

% of Scope 1 emissions covered by the ETS
16.7

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
0

Allowances purchased
8550908

Verified Scope 1 emissions in metric tons CO2e
8550908

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
Verification of above Scope 1 emissions corresponds to UK ETS verification only. All Scope 2 emissions from UK assets were also verified but not under the UK ETS. For this reason the value for Scope 2 under the UK ETS is 0.

Other ETS, please specify

% of Scope 1 emissions covered by the ETS
0

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
0

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
23382012

Verified Scope 2 emissions in metric tons CO2e
20222

Details of ownership
Facilities we own and operate

Comment
Emissions from our Russian assets are accounted according to a method proposed from the Russian Federation government. It is not a ETS (Russian Federation did not have an active ETS in 2021 which would affect Uniper assets in Russia), but we include them for completeness and consistency reasons (other answers).

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

UK carbon price floor

Period start date
January 1 2021

Period end date
December 31 2021

% of total Scope 1 emissions covered by tax
16.7

Total cost of tax paid
179569059

Comment
Uniper assets emitted 8550907,57, which were taxed at 18 BP (21 EUR) in 2021.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Uniper supports any CO2 regulation system that is market oriented. Currently Uniper must participate in e.g. the UK carbon price floor and the EU ETS by law. Therefore, Uniper´s installations comply with the system by obeying its underlying rules and regulations. Since Uniper manages CO2 like any other commodity such as coal or gas we develop e.g. a hedging strategy to minimize CO2 market risk and to maximize the contribution of this commodity to Uniper´s performance. For the purpose of financial analysis of coal- and gas-fired plants, spot market price of CO2 certificates (EU ETS) is used for all countries except Russia (as no CO2 trading system in place). This allows for a short-term decision process; which kind of power station is dispatched to fulfil the demand of power. The stocking of certificates for generation is planned centrally. We have integrated carbon risk into our operational decision making for projects. All projects that fall within the requirements of the EU ETS have a financial assessment based on their future emissions which allows to identify the most profitable option.

On the operational side, we created back in 2005 the Uniper Competence Service Center CO2 to serve as our central entity for collecting and managing data relating to carbon emissions compliance and EUAs. This improves the quality of our planning and makes Uniper´s participation in the ETS more efficient. Uniper has documented processes to ensure compliance with the EU ETS. Moreover, Uniper has trained personnel both at site and group (centralized) level, thus ensuring a high quality MRV system for both mandatory and voluntary GHG reporting.

To be politically and financially viable, the strategies for achieving climate related objectives require a stable investment framework. Such strategies will involve capital-intensive assets with operating lives lasting several decades. To have the confidence to operate such assets, energy companies like Uniper need a consistent, predictable policy and regulatory environment. To assist us in our decision-making, we discussed scenarios reflecting assumptions about carbon prices levels (e.g. carbon allowances may become scarcer, resulting in higher carbon prices) and other future developments in energy markets. In this way, climate protection is factored into our planning, investment decisions, and risk management.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?
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.

Objective for implementing an internal carbon price
Navigate GHG regulations
Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities

GHG Scope
Scope 1

Application
Uniper Commodity Outlook (UCO) EUA prices included in investment decisions

Actual price(s) used (Currency /metric ton)
53

Variance of price(s) used
Average price for 2021 ETS EUA.

Type of internal carbon price
Shadow price

Impact & implication
The applied Uniper internal carbon price is derived from the future commodity outlook which forecasts EUA prices based on fundamental market factors. In the context of the Uniper asset fleet strategy, this price is used to make general and specific financial judgements on future operational costs and power plant investments in existing and new assets. By the end of 2021 Uniper started discussions on a new Internal Carbon Pricing assessment based on an internal penalty per emitted ton CO2. The test phase of this initiative will start in June 2022.

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
Innovation & collaboration (changing markets)

Details of engagement
Other, please specify (Climate responsibility is part of the cooperation conditions set by Uniper for providers.)

% of suppliers by number
20

% total procurement spend (direct and indirect)
0

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement
Uniper is conscious about the boundaries to be considered when it comes to the implementation of effective measures to mitigate the climate related impacts of its activities. In regard to procurement, Uniper has clear rules to select providers, which include environmental aspects. In its Sustainability Supplier Selection Criteria, special

mention is made to minimize emissions to air.

Impact of engagement, including measures of success
Our objective is to have a positive impact on sustainability by integrating ESG aspects into our supplier selection and decision-making pro - cess. In selecting suppliers, we apply sustain - ability criteria that are relevant to our procurement categories and also meet our business requirements. The criteria reflect the SDGs prioritized in our sustainability strategy. From 2021 onward, this process has been supported by a new digital tool developed in-house in 2020: the Sustainability Impact Compass. The tool, which supplements our existing processes (such as mandatory KYC and Code of Conduct checks during supplier registration), is used to identify and prioritize cate - gory-specific sustainability issues and provide recommendations on tender evaluation criteria. It enables procurement managers to quickly identify suppliers with ESG issues, receive guidance on how these issues can be measured, and find examples of how to ask suppliers for information on relevant issues. And therefore enforces the following benefits: - Transparency in climate related topics - Awareness of suppliers that climate topics are tracked, - Climate responsible supplier development, - Incentivizing supplier climate responsible behavior

Comment

Type of engagement
Engagement & incentivization (changing supplier behavior)

Details of engagement
Climate change performance is featured in supplier awards scheme

% of suppliers by number
2

% total procurement spend (direct and indirect)
0.01

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement
This engagement is related to the participation as an active member in collective sectorial initiatives aiming to reduce GHG in the respective sectors.

Impact of engagement, including measures of success
This memberships will result in sector specific climate performance benchmarks and will open spaces for members experts communications around topics like transparency and MRV. On top of its Guidance for Responsible Procurement (which includes specific elements related to climate responsibility), Uniper is participating in several initiatives related to decarbonization of the supply chain. Two examples are: - OGMP, a multi-stakeholder initiative launched by UNEP and the Climate and Clean Air Coalition. The OGMP is a comprehensive, measurement-based reporting framework for the oil and gas industry that improves the accuracy and transparency of methane emissions reporting in the oil and gas sector. It will work with its suppliers and custom - ers on efforts to reduce these indirect emissions. Unipers gas storage business, for example, is a mem - ber of a global alliance dedicated to reducing fugitive methane emissions. We also intend to leverage our position as a leading gas merchant by helping to establish global trade in climateneutral gases and other climate-friendly energy carriers. We already trade helium in the United States and will soon be adding hydrogen and hy - drogen-related commodities to our global busi - ness portfolio. During 2022, we will develop a systematic approach to monitor, report, and reduce the methane emissions of our operations (in accordance with OGMP 2.0) and work with our suppliers to develop the approach for value chain methane reduction. - Sea Cargo Charter (SCC), an initiative which is aligned with the Poseidon Principles and is consistent with the policies and ambitions of the International Maritime Organization (IMO), including its ambition for greenhouse gas (GHG) emissions to peak as soon as possible and to reduce shipping's total annual GHG emissions by at least 50% by 2050 compared to 2008. As such, it sets a standard for reporting emissions, thus enhancing transparency and creating a global baseline to support and work towards the greater goals for our society and the goal to align our maritime activities to be environmentally responsible. Uniper started membership negotiations late in 2021.

Comment

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Collaborate with suppliers on innovative business models to source renewable energy

% of suppliers by number
0.1

% total procurement spend (direct and indirect)
0.1

% of supplier-related Scope 3 emissions as reported in C6.5
0.1

Rationale for the coverage of your engagement
Implementing innovative initiatives with suppliers to generate climate relevant impact at small scale in the supply chain through: - Consciousness and incentive on Climate related transparency and performance of Uniper´s suppliers - Reduce Life Cycle Emissions of IT hardware - Awareness of individual GHG emissions - Reducing provider´s mobility

Impact of engagement, including measures of success
CO2 tracking of business travel New home for old IT devices (re-use of IT hardware) App development or individual GHG tracking in 2021 Greener Transportation and Stock Management (reducing emissions from stocks), reducing travelling emissions Bundling spend to less suppliers (reducing travel emissions) Recycling Packing Material (protect forest) All these small initiative have a rather small impact in the emissions accounting, but contribute significantly to the required awareness on climate related considerations in Uniper´s supply chain, which is considered fundamental for a continuous improvement in climate related performance of the supply chain.

Comment

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect climate change and carbon information at least annually from suppliers

% of suppliers by number
59

% total procurement spend (direct and indirect)

50

% of supplier-related Scope 3 emissions as reported in C6.5
50

Rationale for the coverage of your engagement
% of procurement spent and % of supplier-related scope 3 emissions are approximations Uniper aims to undertake this assessment to all its provides

Impact of engagement, including measures of success
Requiring climate relevant information from suppliers should motivate them to perform, improve and report on this topic as a competitive benefit.

Comment

Type of engagement
Engagement & incentivization (changing supplier behavior)

Details of engagement
Directly work with suppliers on exploring corporate renewable energy sourcing mechanisms

% of suppliers by number
0.1

% total procurement spend (direct and indirect)
0.1

% of supplier-related Scope 3 emissions as reported in C6.5
0.1

Rationale for the coverage of your engagement
Rationale behind this is to reduce Scope II Emissions from a service provider (Regasification Plant) of the LNG supply chain. This engagement consist in the incorporation of price of GOOs of the regasification capacity contracted.

Impact of engagement, including measures of success
Even though the impact is limited compared to the overall volumes of the LNG Chain, it sets a precedent in Unipers efforts on Scope III emission reductions through hedging of Scope II emissions with GOOs

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Other, please specify	Other, please specify (GOO sales.)

% of customers by number
1

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement
Uniper offers bundled and debundled GOOs from its Hydroelectric business in Germany and Sweden. The scope of engagement are companies which can use GOOs for the purpose of deduction of consumed electricity within the AIB, which covers the EU , Norway and Switzerland.

Impact of engagement, including measures of success
The buyer of those GOOs can deduct (after a well established surrendering process) the certified amounts from its Electricity consumption volumes for the calculation of its undirect emissions (principally scope II).

Type of engagement & Details of engagement

Collaboration & innovation	Other, please specify (Gris Stability)

% of customers by number
0.1

% of customer - related Scope 3 emissions as reported in C6.5
0.1

Please explain the rationale for selecting this group of customers and scope of engagement
The Sinchronous Compensation projects are aimed at encouraging zero MW solutions for inertia, dynamic voltage support and short circuit level contribution all of which are important factors in ensuring grid stability and keeping the energy system in balance. Uniper will be the biggest provider of services of this nature in UK and will deliver projects at Killingholme and Grain up to 2026. The tender demonstrated an innovative approach to developing solutions and technologies for a low-carbon future, making use of our existing assets in a novel manner. For example, at Killingholme we will reuse the redundant steam turbine generators left over from the OCGT conversion and replace the steam turbines with flywheels to provide these services. This re-purposing also saved considerable capital expenditure and shortened delivery timescales. Providing inertia and voltage in this way (i.e. without combustion of fuel) helps to enable the energy transition by maintaining grid stability and security of supply as more intermittent renewable generation technology comes online. This also supports National Grid ESO in their ambition to operate a zero-carbon energy grid in the future.

Impact of engagement, including measures of success
As we move towards a low carbon future and more of our electricity is generated from renewable sources, one of the challenges for the energy grid is how to replace the services that are, in the main, provided by thermal generation (inertia) that keep the grid stable and our electricity supply at the required frequency. Inertia in the system plays a role similar to shock absorbers in a cars suspension, smoothing out the bumps and potholes and helping to keep the wheels on the road – System inertia slows down the rate at which frequency changes, helping to keep the grid stable. Rapid changes in frequency can create instability in the system, which can cause problems for customers with intermittent supply and blown appliances. Working to a challenging time frame, Uniper was able to bring together a cross-functional team including Power Trading, Asset Management, Asset Operations and Uniper Technologies to create both technically compliant and commercially attractive offers to National Grid ESO. The delivery of these projects is undertaken under the overall coordination of Uniper Technologies with support from across the business. Services started in April 2021.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?
Yes, suppliers have to meet climate-related requirements, but they are not 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
Climate-related disclosure through a public platform

Description of this climate related requirement
Through its own membership in Sea Cargo Charter (SCC), Uniper aims to encourage its providers to increase assessment, transparency, enforcement and accounting along its supply chain involving bulk shipping. SCC is aligned with the IMO decarbonization objectives.

% suppliers by procurement spend that have to comply with this climate-related requirement
0.1

% suppliers by procurement spend in compliance with this climate-related requirement
0.1

Mechanisms for monitoring compliance with this climate-related requirement
Supplier self-assessment

Response to supplier non-compliance with this climate-related requirement
Other, please specify (Investigate and discuss)

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

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

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)

Europe's energy transition is under way, and Uniper is actively shaping it. To help implement the Paris Agreement, Uniper is working to help gradually decarbonize the energy system while simultaneously ensuring a reliable energy supply. Uniper has made this statement in the 2021 Sustainability Report. Uniper takes part in The Climate Action 100+ Net-Zero Company Benchmark, which assesses the performance of companies against the initiative's three key goals: improve governance of climate risks and opportunities, reduce GHG emissions in line with goals of the Paris Agreement, and provide enhanced disclosure aligned with the recommendations of the TCFD. There are several examples in the annual report 2021 and the sustainability report 2021 where alignment of Uniper decarbonization efforts with the Paris Agreement is mentioned. We attach only one of them (as an excerpt) taken from the Sustainability Report.
Evidence of Paris Agreement alignment in SusRep 2021.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

Discussions on the decarbonization strategy and the concrete measures were increasingly held in 2021. Not only through the Sustainability Council (meeting quarterly), but also through specific project initiatives (for example the Scope III project (which allowed to better understand the complexity and challenges of Scope III accounting and decarbonization), increased human resources and increase in climate related monitoring frequency in 2021)

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>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate
Emissions trading schemes

Specify the policy, law, or regulation on which your organization is engaging with policy makers
EU-ETS

Policy, law, or regulation geographic coverage
Regional

Country/region the policy, law, or regulation applies to
EU27

Your organization's position on the policy, law, or regulation
Support with no exceptions

Description of engagement with policy makers
Uniper very clearly supports a strengthening of the EU-ETS. This has been addressed by speeches and talks with politicians as well as journalists by our Political Affairs team. Permanent proposals of improvements of the EU-ETS mechanisms in our condition as user.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
<Not Applicable>

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate
Emissions trading schemes

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Backloading and Market Stability Reserve: indirect engagement in discussions on CO2 price stability mechanisms (Backloading and Market Stability Reserve)

Policy, law, or regulation geographic coverage
Regional

Country/region the policy, law, or regulation applies to
EU27

Your organization's position on the policy, law, or regulation
Support with no exceptions

Description of engagement with policy makers
Implementation of Backloading and Market Stability Reserve Mechanisms by the European Comission

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
<Not Applicable>

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate
Adaptation and/or resilience to climate change

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Coal Phase Out

Policy, law, or regulation geographic coverage
National

Country/region the policy, law, or regulation applies to
Germany
Netherlands

Your organization's position on the policy, law, or regulation
Support with major exceptions

Description of engagement with policy makers
Germany: general support for establishment of coal commission. Closely following discussions during 2019 which were still valid in 2021 . Netherlands: Proposed phase-out until 2030, ongoing discussions on compensations

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement 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
Climate Relevant Section of 2021 AR.pdf

Page/Section reference
From Page 90 to 110

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment
In 2021 Uniper included for the first time information on climate responsibility based on the TCFD recommendations. Due to upload capacity limits of ORS we cannot upload the whole document.

Publication
In voluntary sustainability report

Status
Complete

Attach the document
Climate Relevant Content of Uniper-Sustainability-Report-2021-EN.pdf

Page/Section reference
From page 17 onwards. Due to upload capacity only the relevant section was uploaded.

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment
Due to capacity limit of the ORS, we cannot upload the complete Sustainability Report, which can be found under: https://www.uniper.energy/sites/default/files/2022-04/Uniper-Sustainability-Report-2021-EN.pdf

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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, both board-level oversight and executive management-level responsibility	The Uniper board has committed to develop a science-based strategy to measure and enhance the biodiversity related to our operations and new developments. The development of this strategy and associated targets will be overseen by a Uniper Board Member and members of with executive management responsibility through the various Governance process in place in Uniper e.g. Sustainability Council, which is chaired by the COO.	<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 only	Commitment to Net Positive Gain	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

C15.4

(C15.4) 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	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years	<Not Applicable>

C15.5

(C15.5) 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	No, we do not use indicators, but plan to within the next two years	State and benefit indicators Pressure indicators Response indicators

C15.6

(C15.6) 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 other regulatory filings	Content of biodiversity-related policies or commitments	The Uniper Sustainability Report sets out the details of the 5 major voluntary measures we undertook to enhance biodiversity around our existing operations.

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	Chief Operations Officer (COO) and Chief Sustainability Officer (CSO)	Chief Operating Officer (COO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	163979000000

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member
National Grid PLC

Scope of emissions
Scope 1

Allocation level
Business unit (subsidiary company)

Allocation level detail
Uniper UK plc

Emissions in metric tonnes of CO2e
8599743

Uncertainty (±%)
0

Major sources of emissions
Combustion of Natural Gas in Uniper´s Gas Turbine fleet (6 locations) followed by Ratcliffe (coal plant). All of them in the UK.

Verified
Yes

Allocation method
Allocation not necessary due to type of primary data available

Market value or quantity of goods/services supplied to the requesting member
16938519

Unit for market value or quantity of goods/services supplied
Megawatt hours (MWh)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
100% of the energy produced by Uniper in the UK is sold the National Grid.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

No public information used, as 100% of electricity produced in UK is sold to National Grid plc.

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Customer base is too large and diverse to accurately track emissions to the customer level	Uniper is increasing HSSE capacities in order to further develop the quality of climate-related data. In parallel, Uniper is investing in digitalization solutions where GHG accounting plays a central role. Looking into future opportunities, a central automated system for tracking customers and their emissions would be helpful. Uniper is joining to initiatives which objective is to standardize GHG accounting methods both upstream and downstream.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?
Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

In 2021 Uniper reported 36,9% of its Scope 1 (direct) emissions under the EU ETS. The rest of Scope I emissions (63,1%) correspond to assets in UK (own emission trading scheme since Jan 1, 2021) and Russian Federation (No ETS), as well as the CH4 and N2O contributions from fuel combustion, mobility sources, volatile gases and other minor sources not reported under the ETS. Capabilities to assign emissions to customers can be done using different methods. In the case of the UK (isolated grid) it results very easy, as all of the production in UK is sold to one client (National Grid), and therefore 100% of the verified emissions from Uniper in UK are linked to that client (also Scope 2 emissions, as National Grid is the only provider).

As an example for capability development, the "Green Customer" project was launched in 2020 to position Uniper as a partner for decarbonization solutions while placing the customer squarely in the center of activities within our organization. During 2021 the Green Customer initiative, which aims to make Uniper´s experience in sustainability matters (including Climate Responsibility) available to its customers, continued supporting customers making its own experience in CO2 accounting and reporting available.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member
National Grid PLC

Group type of project
Reduce Logistics Emissions

Type of project
Please select

Emissions targeted
Please select

Estimated timeframe for carbon reductions to be realized
Please select

Estimated lifetime CO2e savings

Estimated payback
Please select

Details of proposal

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
No

SC4.1

(SC4.1) Are you providing product level data for your organization’s goods or services?
Yes, I will provide data

SC4.1a

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.
32.2

SC4.2a

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.

Name of good/ service
Electricity

Description of good/ service
No need to describe electricity

Type of product
Final

SKU (Stock Keeping Unit)
N.A.

Total emissions in kg CO2e per unit
454.14

±% change from previous figure supplied
0

Date of previous figure supplied
June 30 2021

Explanation of change
Intensity calculation methodology changed in 2021, as generation elements were added to the previous methodology. Therefore decrease or increase in GHG intensity cannot be discussed.

Methods used to estimate lifecycle emissions
GHG Protocol Product Accounting & Reporting Standard

SC4.2b

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

Name of good/ service
Electricity (MWh)

Please select the scope
Scope 1

Please select the lifecycle stage
Production

Emissions at the lifecycle stage in kg CO2e per unit
0.548

Is this stage under your ownership or control?
Yes

Type of data used
Primary

Data quality
Life Cycle Emission data correspond to Scopes I and III.a (GHGP) High data quality (EU ETS methods and external verification) for scope I, lower data quality for Scope III.a, due to use of emission factors with high uncertainty levels (no other emission factors were available)

If you are verifying/assuring this product emission data, please tell us how
Scope I according to EU ETS rules, i.e. by an external accredited verifier with a "reasonable assurance" level. Scope I, II and III by two independent verifier s(PWC and Deloitte)

SC4.2c

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

Name of good/ service	Initiative ID	Description of initiative	Completed or planned	Emission reductions in kg CO2e per unit
Electricity	Initiative 1	Digitalization of GHG accounting	Ongoing	0

SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?
No

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

The European Climate Pact Submission

Please indicate your consent for CDP to showcase your disclosed environmental actions on the European Climate Pact website as pledges to the Pact.
Yes, we wish to pledge to the European Climate Pact through our CDP disclosure

Please confirm below
I have read and accept the applicable Terms