Nokia Group - Climate Change 2023

C0. Introduction

C0.1

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

At Nokia, we create technology that helps the world act together. We are a business-to-business technology innovation leader. We are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

For our latest updates, please visit us online www.nokia.com

C0.2

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

Reporting year

Start date
January 1 2022

End date
December 31 2022

Indicate if you are providing emissions data for past reporting years
No

Select the number of past reporting years you will be providing Scope 1 emissions data for
<Not Applicable>

Select the number of past reporting years you will be providing Scope 2 emissions data for
<Not Applicable>

Select the number of past reporting years you will be providing Scope 3 emissions data for
<Not Applicable>

C0.3

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

Albania
Algeria
Angola
Argentina
Armenia
Australia
Austria
Azerbaijan
Bangladesh
Belarus
Belgium
Benin
Bolivia (Plurinational State of)
Bosnia & Herzegovina
Brazil
Brunei Darussalam
Bulgaria
Burkina Faso
Cambodia
Cameroon
Canada
Chile
China
China, Macao Special Administrative Region
Colombia
Congo
Costa Rica
Côte d'Ivoire

Croatia
Cuba
Czechia
Denmark
Dominican Republic
Ecuador
Egypt
El Salvador
Estonia
Ethiopia
Finland
France
Georgia
Germany
Ghana
Greece
Guatemala
Hong Kong SAR, China
Hungary
India
Indonesia
Iran (Islamic Republic of)
Iraq
Ireland
Israel
Italy
Japan
Jordan
Kazakhstan
Kenya
Kuwait
Lao People's Democratic Republic
Latvia
Lebanon
Libya
Lithuania
Madagascar
Malaysia
Mali
Mauritania
Mexico
Morocco
Mozambique
Myanmar
Netherlands
New Zealand
Niger
Nigeria
Norway
Pakistan
Panama
Peru
Philippines
Poland
Portugal
Puerto Rico
Qatar
Republic of Korea
Romania
Russian Federation
Saudi Arabia
Senegal
Serbia
Singapore
Slovakia
Slovenia
South Africa
Spain
Sri Lanka
Sweden
Switzerland
Syrian Arab Republic
Taiwan, China
Thailand
Togo
Tunisia
Turkey
Turkmenistan
Uganda
Ukraine
United Arab Emirates

United Kingdom of Great Britain and Northern Ireland
United Republic of Tanzania
United States of America
Uruguay
Uzbekistan
Venezuela (Bolivarian Republic of)
Viet Nam
Yemen
Zambia

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

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	FI0009000681

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual or committee	Responsibilities for climate-related issues
Board Chair	Under our Corporate Governance Guidelines, the Board of Directors evaluates Nokia's environmental and social activities and governance practices, related risks and target setting as well as their implementation and effectiveness in the company. The Board of Directors has overall oversight of Nokia's ESG activities, responsible business practices and transparency, coupled with strong policies and procedures. The Board oversees ESG embedded within all parts of the organization, including corporate, technology and Business Group strategic plans. In 2022, the Board approved the new enhanced ESG strategy of the company focusing on the environment, industrial digitalization, security & privacy, bridging the digital divide, and responsible business. The Board also reviewed the related risks and opportunities, approved the targets on climate change and diversity included in the short-term incentive program, monitored them and other ESG targets as well as the evolving ESG requirements and expectations, investor feedback and the disclosure approach. In addition, the Board Committees monitors environmental and social developments and activities in the company in their respective areas of responsibilities. The Board holds an annual sustainability review of selected ESG targets, key actions and performance, approves corporate donations budget and oversees evolving ESG requirements and expectations, investor feedback and the disclosure approach. The Board reviews ESG disclosures as part of our quarterly reporting, which include climate topics, such as Nokia's latest achievements in relation to climate change mitigation and, climate-related targets.
Board-level committee	The Audit Committee responsibilities include oversight of the IT and services security risks and maturity. The Audit Committee also annually reviews sustainability disclosures as well as the use of conflict minerals in Nokia's products presented in the annual reports and the related regulatory filings. The committee oversees implementation and planning of new climate and other sustainability reporting requirements, as well as further oversight of the ethics and compliance program and information and services security risks and maturity.
Board-level committee	The Technology Committee reviews how the company's ESG strategy with its strong climate agenda is embedded into Nokia's technology strategy to increase energy and material efficiency of our products and solutions, on our journey to net zero.
Board-level committee	The Personnel Committee assists the Board in the incorporation of the ESG related metrics in the incentive structures and oversees the human capital management, including personnel policies and practices related to Nokia culture, physical safety, employee wellbeing, diversity, recruiting, development and retention. Climate and other environment- related KPIs are part of the ESG metrics.
Board-level committee	The Corporate Governance and Nomination Committee assesses and advises the Board in ES) related activities and practices, to enhance the governance structure supporting them. Climate and environmental activities are part of this process.

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 annual budgets Overseeing and guiding employee incentives Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Overseeing and guiding scenario analysis Overseeing the setting of corporate targets Overseeing and guiding public policy engagement Overseeing value chain engagement	<Not Applicable>	Minimum once a year, the board has an Enterprise Risk Management (ERM) review of our key risks and opportunities, including risk factors from climate-related issues. Further oversight to climate-related issues is provided by the Board's annual sustainability review, which includes such matters as review of the targets, key actions and performance. The Board also reviews our quarterly ESG disclosures, which include climate topics, such as Nokia's latest achievements in relation to climate change mitigation and other areas, our climate-related targets and other matters. The Board has a proactive and value-driven role in driving responsible business practices at Nokia and in our value chain. The Board of Directors has overall oversight of Nokia's ESG activities, responsible business practices and transparency as well as the related policies and procedures. The Board oversees ESG embedded within all parts of the organization, including in corporate, technology and Business Group strategic plans. The Board also oversees both the financial outcome when delivering strategic value and the progress as measured against our ESG metrics when delivering sustainable value. The Board guides the incentives structure for the President and CEO and the rest of GLT members.

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	When assessing the competence of board members on climate-related issues, we consider relevant education and/or career expertise. The relevance is evaluated case by case. Among current Board Members five out of ten have practical experience and skills in Environmental and Social issues. For example, the Chair of our Corporate Governance and Nomination Committee has climate-related competence acquired through their experience of leading Vaisala Corporation. Vaisala is a global leader in weather, environmental, and industrial measurements and works together with nearly all meteorological institutes in the world, supporting them in gathering accurate weather observations for weather forecasts that are critical for societies.	<Not Applicable>	<Not Applicable>

C1.2

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

Position or committee
Chief Financial Officer (CFO)

Climate-related responsibilities of this position
Implementing a climate transition plan
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities
Other, please specify (Climate-related topics are reported in quarterly reports prepared under the supervision of our CFO. Our CFO functions in the role of Chief Risk Officer and presents to the Board when they review our key risks and opportunities in our ERM framework.)

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

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

Please explain
Our Chief Financial Officer (CFO) is a member of the Group Leadership Team. Climate-related topics are reported in quarterly reports prepared under the supervision of our CFO, which are reviewed by the Board of Directors. Our CFO also has the role of Chief Risk Officer and is responsible for driving the role of Enterprise Risk Management (ERM) in our governance framework and supports in bringing ERM matters in front of the Group Leadership Team and the Board. At least once per year, the Board of Directors has an ERM review of our key risks and opportunities which are presented by the CFO. In addition, our CEO, CFO and business group presidents review

additional sustainability topics at a minimum of two times per year as part of Nokia business reviews.

Position or committee
Other C-Suite Officer, please specify (Chief Corporate Affairs Officer (CCAO))

Climate-related responsibilities of this position
Other, please specify (Our CCAO has overall responsibility for sustainability and climate in the Group Leadership Team (GLT). CCAO presents our climate-related strategy, progress and targets reviews to the Board on behalf of the entire GLT.)

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

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

Please explain
Nokia Group Leadership Team and its members are responsible for the overall management of the company including climate related issues when relevant to their area of responsibility. Our Chief Corporate Affairs Officer (CCAO) is a member of the Group Leadership Team and has the overall responsibility for sustainability and climate at the executive management level. During 2022, the Chief Corporate Affairs Officer provided oversight of the enhanced Nokia ESG strategy development and its ongoing integration into our business and technology strategies and ensured focus was given to those areas where we believe we can have the greatest impact both for the business and the planet. Also, the CCAO reviewed Nokia's key sustainability programs and targets as part of quarterly business reviews. The Chief Corporate Affairs Officer and Vice President, ESG together present sustainability reviews to the Board of Directors at minimum once a year. These reviews include for example progress against climate-related targets, climate strategy, key actions, programs and performance.

Position or committee
Other committee, please specify (Group Leadership Team (GLT))

Climate-related responsibilities of this position
Other, please specify (The GLT reviews and approves implementation of and changes to ESG (including climate related) policies, management & operational frameworks, strategy, targets and performance. The GLT conducts sustainability reviews at a minimum twice per year.)

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

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

Please explain
In line with our mode of operation, the GLT approves ESG-related strategy, targets and operational frameworks, within which corporate functions and business groups can operate. This enables the accountability and empowerment of each business group while maintaining appropriate strategic and operative oversight. Independent councils and committees, such as the Sustainability Council, are used to steer, align and ensure the implementation of these strategies, targets and frameworks and make recommendations to the GLT. One example of sustainability-related decisions made by the GLT in 2022 is the decision to join the RE100 initiative where our target to use 100% renewable electricity in our facilities by 2025 can be externally verified.

Position or committee
Sustainability committee

Climate-related responsibilities of this position
Monitoring progress against climate-related corporate targets

Coverage of responsibilities
<Not Applicable>

Reporting line
Other, please specify (Chief Corporate Affairs Officer (CCAO))

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

Please explain
Our sustainability committee is called the Sustainability Council. In line with our mode of operation, the Group Leadership Team (GLT) approves sustainability-related strategy, targets and operational frameworks, within which corporate functions and business groups can operate. This enables accountability and empowerment of each business group whilst maintaining appropriate strategic and operative oversight. Independent councils and committees, such as the Sustainability Council, are used to steer and align the sustainability agenda, ensure the implementation of Nokia's strategies, targets and frameworks and make recommendations to the GLT. Targets and operational frameworks include climate related topics such as emissions.

The Sustainability Council is chaired by Vice President, ESG, who reports to the Chief Corporate Affairs Officer. The Council consists of senior leaders from the business units and functions representing product development, real estate, strategy and technology, human resources, and procurement. In 2022, the Council convened 10 times. The Council is tasked to steer the alignment of sustainability (including climate-related) strategy, priorities, and the implementation of sustainability activities across Nokia, contribute to the sustainability strategy and materiality assessment, review sustainability targets and performance and provide additional insight to sustainability-related risks and opportunities. Members include senior leaders from units representing product development, real estate, strategy and technology, human resources, Legal & Compliance, and procurement.

Position or committee
Other committee, please specify (ESG function)

Climate-related responsibilities of this position
Other, please specify (At the operational level, sustainability is managed by the ESG function, the Legal & Compliance and subject matter experts in other functions and business units.)

Coverage of responsibilities
<Not Applicable>

Reporting line
Corporate Sustainability/CSR reporting line

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

Please explain
The corporate ESG function drives the implementation of the ESG strategy and actions needed to achieve targets at the operational level. Subject matter experts contribute fact-based input to the different functions and business groups. Ensures corporate sustainability reporting is in line with requirements and regulations. Legal & Compliance team supports employees with training and guidance, fostering ethical decision making and choices that are consistent with our values, policies, and laws. Promotes an open reporting culture and oversees robust and impartial concern reporting, investigation, and remediation processes.

Position or committee
Other committee, please specify (Donations and Sponsorships Committee)

Climate-related responsibilities of this position
Other, please specify (Managing annual budgets for corporate donations and sponsorship, monitoring progress of donation programs.)

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

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

Please explain
• Sets principles for allocation of corporate donations and investments for universities and communities
• Approves funds for donation allocation and reviews major sponsorships
• Assesses the impact of all donation programs
Members of the Dontations and Sponsorhip Committee are Chief Financial Officer, Chief Corporate Affairs Officer, Chief People Officer, Chief Technology Officer, Chief Compliance Officer, Vice President Head of Customer Experience Finance.

Position or committee
Other, please specify (Human Rights Due Diligence Council)

Climate-related responsibilities of this position
Other, please specify (Managing the organization's Human Rights policy and procedures)

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

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

Please explain
• Governs high-level alignment on Nokia's Human Rights Policy and implementing procedures
• Steers decisions on Nokia businesses from a human rights point of view
• Ensures alignment between all business groups and functions and appropriate mitigations are put in place

Members of the Human Rights Due Diligence Council: Chief Legal Officer, Chief Corporate Affairs Officer, Chief Compliance Officer, VP ESG, VP Technology Leadership, other senior leaders per need. Head of Human Rights, and Legal Counsel.

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	

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
Corporate executive team

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary
Shares
Other, please specify (Absolute TSR (as measured by dividend adjusted share price at the end of the performance period))

Performance indicator(s)
Shareholder approval of climate transition plan
Progress towards a climate-related target
Achievement of a climate-related target
Implementation of an emissions reduction initiative
Other (please specify) (Diversity targets)

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

Further details of incentive(s)
For the Nokia Group Leadership team, in 2022, short-term incentive targets and achievements were based on a mix of metrics. Targets were measured either at a Nokia Group level or, alternatively, a mix of Nokia Group and business group level for business group presidents. One of these metrics was ESG (carbon emissions and diversity). Short-term incentives are based on performance against single-year targets. Targets for the short-term incentives are set at the start of the year and achievement is assessed at the end of the year. In 2022, ESG actions to reduce carbon emissions and become a more diverse employer represented 10% of the total 100% of the Nokia scorecard.

The 2022 short-term incentive achievement against the 2022 targets was as follows: Diversity weight was 5% and the target is to achieve 60% diversity of new hires. Emissions Scopes 1, 2 and 3 weight was 5% and the target to achieve 293 955 tCO2e (Scopes 1 and 2) and Balanced scorecard (Scope 3).

The main form of long-term incentives for the President and CEO, and the rest of the GLT is the Performance shares. Nokia's compensation approach and structure continues to play a key role in supporting business strategy and sustainable share price growth over time.

Long-term incentive awards are normally made in performance shares and paid for performance against longer-term targets. This reflects our commitment to driving the best direct, long -term results and closely aligns plan participants with the interests of shareholders.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
Targets for the short-term incentives are set annually at or before the start of the year, balancing the need to deliver value with the need to motivate and drive performance of the Group Leadership Team. ESG targets are selected from a set of strategic metrics that align with driving sustainable value for shareholders and are in the context of analyst expectations and the annual plan to deliver Nokia's strategy and shape Nokia's future success and sustainability.

During 2022 we also met with 13 of our largest shareholders and several other key stakeholders, discussing a range of issues, primarily focused on ESG and equity topics. These meetings have helped to inform our views and strengthen our belief that ESG measures are one of the core components of our incentive plans and have led to us increasing the proportion of ESG weighting in the annual short-term incentive for the President and CEO and the GLT members to 20%.

C2. Risks and opportunities

C2.1

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

C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	1	This is our annual plan and monthly business review horizon.
Medium-term	1	3	This is our annual long-range forecast horizon (3 years).
Long-term	3	10	Long term is typically up to 10 years but in some cases we may consider a longer time horizon.

C2.1b

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

Nokia risk management covers strategic, operational, financial, compliance and hazard risks and opportunities. Climate change related issues are part of this risk management process and taxonomy. Under the Nokia Enterprise Risk Management (ERM) framework, significance of individual risk factors is evaluated against six different dimensions (people & environment, compliance, reputation, financial, operative and strategic impact) where the rating per each dimension is based on qualitative criteria on a scale from 0 to 4, where 0 refers to “no impact” and 4 implies a major impact. Risk or an opportunity has a substantive impact on our business when it could, if realized, prevent Nokia from reaching a strategic goal or an objective or require re-evaluation of mid-term/long-term strategic goals or objectives (rating 3 or 4). As a quantifiable indicator, any risk or opportunity with an impact over 150 mEUR on our operating profit or balance sheet is also considered as substantive for Nokia.

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
Climate-related risks and opportunities are integrated into our multi-disciplinary company-wide risk management process which covers strategic, operational, financial, compliance and hazard risks and opportunities. Key risks and opportunities are primarily identified against business targets either in business operations or as an integral part of strategy and financial planning. Risk assessments are completed annually with a bi-annual check point of key topics and any emerging new risks, and including an additional refresh of risk financial impacts prior to year end. Risk financial impact assessment covers a three-year-horizon with the exception of strategically important topics where the potential financial impacts are projected/estimated even further. Risks deemed significant and impacting operations in short term have status updates during business reviews. The process for identifying, assessing and responding to climate-related risks and opportunities covers direct operations, as well as upstream and downstream value chains, and short-, medium- and long-term time horizons.

The Nokia Enterprise Risk Management (ERM) Policy defines key principles of Nokia ERM that apply to all Business Groups, support functions, legal entities and subsidiaries (entities). One of the core principles is that each entity head is an owner of the risks in the area of responsibility and is responsible to identify and manage key risks and capture opportunities (although all employees are responsible for identifying, analyzing and managing risks as appropriate and applicable to their roles and duties.)

Risk identification and assessment process is a combination of top-down and bottom-up approaches. The bottom-up process consists of a regular risk and opportunity assessment update, including interviews, desktop analysis or other means to discover new risks or opportunities. Entities review risk and opportunity qualitative ratings and update financial impact and likelihood estimates as needed, in order to determine which risks and opportunities could have a substantive financial or strategic impact. Responses to climate-related risks and opportunities, such as risk mitigation or opportunity development actions, are documented during the same assessment process. The decision itself on how to respond to a particular risk or an opportunity takes place in the relevant business leadership team meeting. However, material and cross-functional issues are raised to Group level leadership team, typically including relevant proposals from Sustainability Council. This decision making is not tied to any specific time intervals, but done on need basis. Bottom-up update takes place typically once in a year. Concluded key risks and opportunities are managed top-down and monitored as part of business performance management.

In addition to the normal risk identification and assessment process, our ESG function and the Sustainability Council also have a role in assessing climate-related risks and opportunities. The Council consists of senior leaders from units representing product development, sales, real estate, strategy and technology, human resources and procurement, providing a cross-organizational forum to discuss also climate-related issues. The Council steers the alignment of the sustainability strategy, priorities and the implementation of sustainability activities across Nokia. The Council also contributes to the sustainability strategy, materiality assessment and review of sustainability targets and performance, and provides additional insight to risk and opportunity assessment, including climate-related topics. In 2022, the Council convened ten times, and related to the topic of climate change, the Council for example steered the setting of climate targets and the work related to the EU Taxonomy.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	As a global company, we are subject to many climate-related regulatory requirements around the world, such as the EU energy efficiency directive and the EU Taxonomy Regulation and related Climate Delegated Act. Current regulation and constantly evolving regulatory environment is considered relevant for us particularly through aspects such as: - Risk of non-compliance with our legal obligations in relation to emissions reporting due to a fault in our legal and regulatory change monitoring processes. - Risk of litigation/claims brought by governments, private organizations, or individuals for claims arising from alleged failures to meet legal requirements for climate-related matters. - Risk of non-compliance with new or changed disclosure requirements. One example of a risk that we include in our risk assessment is the challenge of data collection which may affect our ability to accurately evaluate climate-related risk and identify and implement strategies for long term resilience.
Emerging regulation	Relevant, always included	We continuously monitor proposed new regulations and assess their potential impact on Nokia. Current international trends show increased enforcement activity in the area of climate change. Examples of climate-related emerging regulation risks that we consider include the development of carbon pricing mechanisms around the world and the evolving scope of climate-related reporting requirements for listed companies (such as the EU Taxonomy for sustainable activities, EU Corporate Sustainability Reporting Directive, U.S. SEC proposal on Climate-related disclosures and IFRS Sustainability reporting standards). Such regulations are expected to bring additional cost to Nokia, for example, by requiring more resources in the transition needed to comply with additional reporting requirements or by potentially increasing the cost of energy/components.
Technology	Relevant, sometimes included	In our highly competitive industry and market with a small number of vendors, technology leadership is required to underpin momentum and financial returns. Technology drives our competitiveness and is therefore a key aspect when it comes to assessing risks and opportunities also in the context of climate change. Examples of specific risks considered: • substitution of existing products and services with lower emission options, as energy efficiency of our network equipment is a focus area across the organization. 5G is already natively greener than 4G, but we investigate how we can further improve energy efficiency in 5G-Advanced. • Unsuccessful investment in new technologies, as we may focus our resources on products and technologies that do not become widely accepted or ultimately prove unviable. • Costs to transition to lower emissions technology, as the transition could, for example, create longer lead times, lead to less agile supply and/or higher component costs.
Legal	Relevant, sometimes included	Failure to comply with our legal obligations in relation to climate is a potential risk to our business. An example of the legal risks that we consider in many risk assessment areas is whether Nokia has processes in place to monitor changes in the laws and regulations, including those related to climate. In addition, we consider the possibility of litigation/claims brought by governments, private organizations, or individuals for claims arising from alleged failures to meet legal requirements for climate-related matters, failure to comply with new or changed disclosure requirements, or for breaches of climate-related contractual commitments and representations that may be included in the customer bid and contract documentation.
Market	Relevant, always included	Market risks are relevant for Nokia as climate change drives green energy demand, customers' energy consumption and emission reduction plans as well as circular economy approaches and may result to change in customer preferences and our sales demand. Examples of risks we consider in our assessments is the potential of climate-related physical and transitional impacts to inflict upward pressure in the cost of raw materials, components and energy prices and how our customers view the energy efficiency of our products and competitiveness of our product pricing.
Reputation	Relevant, sometimes included	Our reputation could be negatively impacted by a failure to appropriately address existing and emerging matters relating to climate. We may fail or be unable to fully achieve one or more of our climate-related targets due to a range of factors within or beyond our control, and we may adjust or modify our targets in light of new information, adjusted projections, or a change in business strategy, any of which could negatively impact our brand and reputation. A failure to, or perception of a failure to, disclose climate-related metrics and set targets that are rigorous enough or in an acceptable format, could negatively impact our brand, reputation, and business. Another example of a climate-related reputational risk we consider is that third-party ratings could make inaccurate or unsubstantiated interpretations of our climate-related practices and performance based on their own assessments and publish such interpretations with or without offering a possibility for us to comment.
Acute physical	Relevant, always included	Acute physical climate-related events may cause disruptions in our or our partners' manufacturing, service creation, delivery, logistics or supply chain. Examples of acute physical risks we consider include e.g. tropical cyclones, wildfires and floods and related severe damage to a production facility of a critical supplier, our operations or our customer.
Chronic physical	Relevant, sometimes included	Long-term physical impacts caused by climate change, such as rising temperatures, may pose risks to our operations and supply chain. Examples of chronic physical risks we consider include water scarcity and rising temperatures and related impacts on our operations. Temperature rise could, for example, potentially lead to increased failure rates in outdoor deployments.

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?

Upstream

Risk type & Primary climate-related risk driver

Acute physical	Other, please specify (Increasing likelihood of extreme weather events or natural catastrophes)

Primary potential financial impact

Other, please specify (Loss of inventory)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Our manufacturing network consisting of both our own manufacturing (23% of the network) and contract manufacturing partners is dispersed around the world: Asia Pacific, Japan and India (27%), Europe (27%), China (32%) and the Americas (14%) in 2022. Many of our own production sites or the production sites of our suppliers/partners are geographically concentrated, with large number of such suppliers/partners based in East and Southeast Asia, a region that can be sensitive to tropical cyclones. We rely on efficient logistic chain elements, such as regional distribution centres or transport chain elements (main ports, streets, and airways). For instance, we have our own manufacturing facility in Chennai (India) and a distribution center in Suzhou (China) that are both in an area vulnerable to tropical cyclones. In the event that any of these geographic areas are affected by extreme weather events or natural catastrophes, such as heavy storms and rain, tornadoes, floods, extreme heat or wildfires, production or deliveries may be disrupted if the facilities, manufacturing equipment or inventory within the premises or in transit get damaged by water, heat or if operations must be shut down, for instance, due to unstable commercial power and road closures.

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)
0

Potential financial impact figure – maximum (currency)
230000000

Explanation of financial impact figure
Regarding the risk likelihood and minimum impact: based on data from our crisis and incident monitoring system and feedback from supply, the probability of an extreme weather event or a climate change-related natural catastrophe to cause severe damage to our operations or of a critical supplier has been rather low, but in the long term the probability of such an event may increase as climate change is expected to increase the occurrence and severity of extreme weather. As an example, roughly 30% of all our crisis alarms or incidents reported in 2022 can be linked to climate change and were mainly related to tropical storms. Fortunately, those have had from minimal to no impact on our operations. As a result, our estimate for potential minimum financial impact is zero.

Regarding potential maximum impact: in the event any of our regional distribution hubs would be caught in the middle of a tropical cyclone or a wildfire, it could lead to a partial or a complete loss of inventory in those premises as a result of being subject to extreme heat and/or water. This could result into customer project rollout delays, customer frustration or even a loss of a customer deal. Assuming, that such an incident would impact our revenues by 1%, that would amount to roughly 230 mEUR impact using 2022 net sales (excluding licensing related revenues) as a reference point (that is EUR 23 326 million * 0,01 = EUR 233 million). We use the 230 mEUR as our maximum financial impact, although it could be even more considering the value of lost inventory and other implications, such as contractual penalties.

Cost of response to risk
5000000

Description of response and explanation of cost calculation
Securing alternative supply sources and transfer of production between sites is part of our normal global supply chain management and business continuity management. We maintain business continuity plans to ensure that products, services and solutions continue to be delivered at acceptable levels during a significant disruption to operations. Business continuity planning includes, for example, response plans for IT outages, loss of building and disruption to supply. For instance, in the event one of our Electronic Manufacturing Suppliers' manufacturing operations were disrupted or destroyed, we would be activating alternative supply source and capacity, likely with minimal or no impact on customer deliveries. In the event of loss of distribution center inventory, we would likely activate additional production capacity across our manufacturing network, replenish from other distribution centers and renegotiate the timing of customer deliveries.

Sometimes risk management actions involve specific case studies, such as a deep dive into the conditions in India that suffer from severe flooding, to map the potential risk areas and impacts. Our Real Estate organization considers both adaptation and mitigation of climate change in its site selection and operations. As an example, the impact of extreme weather conditions is considered as part of the selection of new office locations to manage the impact of natural catastrophe perils such as tropical cyclones or wildfires. These previously described activities are a part of our normal business process without significant additional cost implications.

Maintaining an effective Business Continuity Management system requires separate effort and coordination. Nokia also has insurance for property damage covering buildings, equipment, inventory and machinery in specific locations. We consider cost of property damage insurance and maintaining effective business continuity plans capabilities as the cost of risk response which together amount to roughly 5 mEUR. Cost of property damage insurance is roughly 3.5 mEUR. Business continuity plans are typically updated in six months intervals with estimated time investment of approximately 16 FTE (Full Time Equivalents) across the company altogether annually. We assume the cost of 1 FTE to be approximately 100 000 EUR.

This gives the calculation of: Property damage insurance EUR 3.5 million + 16 FTE * EUR 0,1 million = EUR 5,1 million.

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Upstream

Risk type & Primary climate-related risk driver

Chronic physical	Other, please specify (Rising mean temperatures and impact on disease vectors)

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 mean temperature is likely to change the "disease vectors" and enable spread of some infectious diseases, including Lyme disease and mosquito-borne diseases such as malaria and dengue more broadly than before or increasing likelihood for another COVID-19 like pandemic and related disruption to the business.

COVID-19 pandemic demonstrated the possibility of a global pandemic and how far reaching the impacts can be. We learned that the degree to which such health threats may affect our employees, supply chain, and our results, assets or financial condition are highly uncertain and cannot be accurately predicted, including, but not limited to, the duration and spread of the outbreak, its severity, locations impacted, the governmental or our actions to contain the virus or treat its impact, and how quickly and to what extent normal operating and/or economic conditions can resume. The main impacts of COVID-19 on our operations related to temporary factory closures causing deferred sales, longer component lead times, prolonged shipping times caused by decline in global logistics capacity and increased remote working and travel restrictions affecting

our employees. In 2022, certain countries, such as China, continued to see the impact of COVID-19, causing subsequent lock downs in many cities which had an impact on our industry's supply chain.

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)
200000000

Potential financial impact figure – maximum (currency)
300000000

Explanation of financial impact figure
Insects and animals are already reaching new corners of the globe due to warming climate giving opportunity for diseases such as Ebola, bird flu, Zika-virus, MERS and SARS to take a stronger foothold in new areas. It is possible that a new pandemic disrupts our operations locally or globally. We can estimate a ballpark range of financial impact of a global pandemic based on our experience with COVID-19 but it is impossible to predict with accuracy the precise impact of such risk on us, our operations and our business in the future. In 2020, the impact of COVID-19 on our financial performance and financial position was primarily related to delivery and implementation challenges, including temporary factory closures in the first half of the year, with a 200-300 mEUR negative impact on quarterly net sales, which we use as a basis for minimum and maximum impact figures. Aggregated full year negative impact of 200mEUR on net sales, with majority of these net sales shifting to future periods rather than being lost, related primarily to Submarine Networks in Networks Infrastructure, which experienced temporary factory closures that particularly impacted Q1 2020 and Q2 2020. In addition, COVID-19 affected our operational costs and cash flows in 2020, for example as a result of temporary delays in capital expenditure, lower inventories and cash outflows related to income taxes due to tax reliefs. We also concluded having had a temporary benefit of approximately 250 mEUR in 2020 because of lower travel and personnel expenses due to COVID-19 in overall.

Cost of response to risk
1600000

Description of response and explanation of cost calculation
Nokia has a global manufacturing footprint designed for optimized global supply, and to mitigate against risks such as local disruptive events (like the COVID-19 pandemic and related local lock downs), transportation capacity problems, and political risks. As a result, we are not dependent on one location or entity. As COVID-19 emerged, we established a global command center to manage the supply chain challenges arising from the outbreak and were ready to activate relevant business continuity plans should the situation in any part of our organization have required this.

We put in place strict protocols for Nokia facilities and provided clear advice to our employees about how they can mitigate the risks of COVID-19 in situations where they have to go about critical work. The range of steps taken included banning international travel for Nokia employees, except for strictly-defined 'critical' reasons; closing all our facilities to all visitors, with the exception of people engaged in essential maintenance and services, asking our staff to work from home wherever possible, enhancing building hygiene measures across our facilities, and providing clear advice on how staff can mitigate health risk by maintaining good personal hygiene and wear masks. As working from home became a "new norm", we also provided guidance on how staff can maintain a healthy work-life balance and look after their physical and mental well-being. As a matter of fact, we were able to pivot to remote working very effectively in the early days of pandemic and today Nokia has adopted a hybrid work model offering its employees flexibility on where and how they want to work.

Our business continuity planning covers operative disruptions such as loss of staff or suppliers which relate directly to the implications of COVID-19. We consider cost of maintaining effective business continuity plans as the cost of risk response which amounts to less than 2 mEUR. Business continuity plans are updated roughly in six months intervals with estimated time investment and related labor costs of approximately 16 FTE (Full time equivalents) across the company annually. We assume the cost of 1 FTE to be approximately 100 000 EUR.

This gives the calculation of: 16 FTE (Full time equivalents) * EUR 0,1 million = EUR 1.6 million.

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Upstream

Risk type & Primary climate-related risk driver

Market	Other, please specify (Increased cost of energy)

Primary potential financial impact
Increased direct costs

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

Company-specific description
The initiatives to transition to lower carbon energy sources may lead to increase in the cost of energy. Today already 63% of used energy in our facilities is from renewable sources. We aim to reach 100% purchased electricity from renewable sources by 2025 across our facilities. This covers our offices, laboratories and our own final assembly factories. Due to the green transition, we see a potential for green electricity scarcity which could be driving price increases.

Although the transition may result in an increase in our own energy costs, the bigger impact is expected from increase in the purchase and production costs for our suppliers - who are likely to transfer the cost pressure to us in increased service and material prices. Furthermore, energy price increases may reduce the purchasing

power of consumers and hence impact our business customers' willingness to spend.

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)
30000000

Potential financial impact figure – maximum (currency)
180000000

Explanation of financial impact figure
Nokia is not an energy-intensive company. Our actual energy cost was 119 mEUR in 2022 which is roughly 30% more than in 2021. The increase was driven by energy crisis resulting from Russia invasion over Ukraine. Assuming we would experience a similar impact from renewable energy scarcity, we use 30 mEUR as the approximation of a minimum potential financial impact.

Given the size and scope of our portfolio, we purchase over 15 bEUR worth of products and services in 2022 from around 11 000 different suppliers. Assuming that climate change and transition to lower carbon energy sources would increase purchase prices by 1%, that would represent 150 mEUR increase in our purchase costs. We use 180 mEUR (EUR 30 million increase in energy bill + EUR 150 million increase in purchase prices) as the potential maximum financial impact.

Cost of response to risk
4500000

Description of response and explanation of cost calculation
Our real estate team focuses on developing and delivering energy efficient facilities in-line with our overall company goals and SBT. Our initiatives to reduce energy consumption typically entail projects such as utilization of LED lighting, optimization and upgrade of old equipment such as air conditioning systems, cooling towers or chillers and, in some cases, transferring of real estate operations to a more energy efficient site. Our experts in functions such as Legal, Sustainability and Procurement monitor related regulations and legislative developments, such as the EU energy efficiency directive on the energy performance of buildings and work throughout our value chain to prepare for changes. We continuously implement measures to increase our own and our customers' energy efficiency and engage our suppliers to do the same.

As a case example on reducing the risk of increased energy costs related to potential carbon price increase, in 2022 we continued to reduce energy consumption related emissions in our facilities. The GHG emissions from facilities decreased by 54% as compared to 2019, which clearly exceeded our target of 45%. In addition to our 1.5°C aligned SBT target, we have set other short-, medium- and long-term targets in specific areas of our operations and value chain to drive actions that support the achievement of the SBT and mitigate the impacts of potential increase in energy cost.

We encourage our key suppliers to report their climate impacts and set carbon reduction targets through the CDP Supply Chain Program, helping us to plan improvement programs with our suppliers and improve our Scope 3 emissions reporting. We also run training workshops for our suppliers, covering topics like climate change. These on-going activities in part help to mitigate our energy related cost and risk.

The estimated annual cost impact of risk management is roughly 5 mEUR. In 2022, the cost related to energy efficiency equipment was around 3 mEUR, although we expect the benefits to outweigh the costs over time. The magnitude of time investment related to energy & emissions data management, training, related reporting and regulatory changes screening activities is estimated to be approximately 15 FTE (Full time equivalents).
We assume the cost of 1 FTE to be approximately 100 000 EUR. This gives the calculation of: cost impact of energy efficiency equipment of EUR 3 million + 15 FTE (Full time equivalents) * EUR 0,1 million = EUR 4.5 million.

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?
Downstream

Opportunity type
Products and services

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

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description
We have an impact on climate from a portfolio perspective by continually driving down the power consumption of our products, thus improving the energy efficiency of the products when in use by our customers. The development and/or expansion of low emission goods and services is thus a recognized opportunity for our business.

5G is a natively greener technology than its predecessor 4G and can potentially provide 100 times more traffic with less energy per bit. Beyond its own footprint, 5G is expected to reduce energy use in other sectors of society and industry as it enables new robust use cases. Nokia AirScale Radio Access is a complete radio access solution that helps telecom operators to address the increasing demands for mobile broadband. Innovations such as liquid cooled base stations, new chipset designs and power saving software features based on artificial intelligence, all provide impetus to improve the energy efficiency of 4G and 5G networks and thus minimize related CO2 emissions.

The energy efficiency of mobile networks can be significantly improved by using power-saving features, small cell deployments and new 5G architecture and protocols. 5G has powerful energy-saving features such as advanced sleep modes which help reduce power consumption particularly in low traffic. Our AirScale radio base station products provide even more powerful energy saving software features when network traffic is medium or high. Close to 150 customers have installed energy efficiency software features on our products, including more than 50 customers with 5G energy efficiency features. Over 60% of our radio products in the field have one or more energy efficiency software features activated.

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)
0

Potential financial impact figure – maximum (currency)
233000000

Explanation of financial impact figure
It is very difficult to estimate the impact to our revenues as demand is dependent on long-term market development with various other uncertainties. Based on our 2022 business volumes, for example a 1% growth in demand would lead to approximately 230 mEUR increase in our annual net sales (calculated as: total sales excluding revenue related to licensing of EUR 23 316 million in 2022. * 0,01= EUR 233 million). In the event of no increase to sales, the financial impact would be 0 and thus we consider 0 as a potential minimum financial impact figure. These calculations are provided purely as a sensitivity and should not be interpreted to imply accuracy on the financial impact of the opportunity described.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
Our main strategy to realize the opportunity is to invest in R&D to develop energy efficient products such as developing our AirScale Radio portfolio, new energy efficient fiber access solutions and chipset innovations. As an example, in 2022 we ramped up energy efficiency solutions in silicon, hardware, software and services. We work with our customers to look at the energy used across their networks, not just individual elements. We assess the opportunities to optimize network performance and minimize energy use and therefore lower emissions. We also look at the use of intelligent software to dynamically manage the network, maximizing energy efficiency. In 2022, the GHG emissions from the customer use of sold products decreased by 1% compared to 2021.This small decrease is mainly coming from a reduction in emissions of fixed networks products due to better energy efficiency.

The costs of these improvements and new developments are integrated into our standard product roadmaps. Our Design for Environment (DfE) approach helps to ensure we create technologies that incorporate environmentally sustainable principles. Life cycle thinking is a key component of this approach. It helps us reduce our products' lifetime environmental impact by improving material and energy efficiency and enables compliance with both regulatory and our own requirements. In 2022, our R&D spend was EUR 4 550 million We consider cost to realize the opportunity as zero as there is no distinctive R&D cost to directly map/separate to listed activities.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

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

Company-specific description
Nokia is well positioned to play a key role in the connected world that can help society, people and the planet in various ways, including decarbonization of industry and addressing climate change related challenges. Reliable communications infrastructure is also essential in various catastrophic situations (e.g., destruction by typhoons or hurricanes. Examples of possible opportunity areas are reductions in emissions from physical processes, better use of scarce resources through precision agriculture and improved water management and mitigating risks of flood or drought.

We concentrate these efforts through our Enterprise business with focus on digitalizing and automating processes in asset intensive industries such as energy, manufacturing, transportation and mining as well as making cities smarter, safer and greener. For instance, connected smart factories with 4G/5G private wireless networks

provides a way for the manufacturing industry to reduce its emissions. Energy sector - as the demand for electricity continues to grow – are extending monitoring and controlling capabilities further out to the grid in order to gather data to create intelligent and timely insights leading to faster interventions. The water industry is facing challenges due to climate change, urbanization and aging infrastructure that make water security, safety and sustainability key public policy concerns. With the advent and adoption of low-powered Industrial IoT sensors, there can be a move to a holistic water management approach that can empower flexible and resilient community water systems.

By the end of 2022, we had deployed mission-critical networks to more than 2600 leading enterprise customers in the transport, energy, large enterprise, manufacturing, webscale and public sector segments around the globe. Nokia Bell Labs released its initial research on environmental monitoring and early views on sustainability in 6G.

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)
0

Potential financial impact figure – maximum (currency)
230000000

Explanation of financial impact figure
It is very difficult to estimate the increased revenues through access to new and emerging markets, as the impact relates to long-term development with various uncertainties. Based on our 2022 business volumes, for example a 1% growth in demand would lead to approximately 230 mEUR increase in our annual net sales (total sales excluding licensing business was were EUR 23 316 million in 2022).* 0.01*= EUR 233 million). In the event of no increase in demand, the financial impact would be 0 and thus we consider 0 as a potential minimum financial impact figure. These calculations are provided purely as a sensitivity and should not be interpreted to imply accuracy on the financial impact of the opportunity described.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
Nokia is well positioned to play a key role in the connected world that can help society, people and the planet in various ways, including decarbonization of industry and addressing climate change related challenges. Examples of possible opportunity areas are reductions in emissions from physical processes, better use of scarce resources through precision agriculture and improved water management and mitigating risks of flood or drought. Reliable communications infrastructure is also essential in various catastrophic situations (e.g. destruction by typhoons or hurricanes).

The following case examples describes activities/products to realize the opportunity. In collaboration with 450connect, we are building a nationwide private LTE 450 network in Germany that provides the digitalization platform necessary for the energy transition to decarbonization, and to further secure the energy supply. In addition, with the advent and adoption of low-powered Industrial IoT (IIoT) sensors, increased information and operational data enable to revolutionize the way water systems are managed. As an example, in 2022 we worked with TPG Telecom on Narrowband IoT (NB-IoT) enabled device management contract with Yarra Valley Water that will support a range of use cases to help improve service reliability and responsiveness, and reduce wasted water. We are also actively engaged with the public safety community to drive the adoption of modern broadband mission-critical networks to drive first responders' operational efficiency in any situation, including the most critical ones

Our R&D spend was EUR 4 550 million in 2022 and a part of this is spent on product development aiming at digitalizing and automating processes in asset intensive industries such as energy, manufacturing, transportation and mining as well as making cities smarter, safer and greener. We consider cost to realize the opportunity as zero as there is no distinctive R&D cost to directly map/separate to listed opportunity areas.

Comment

Identifier
Opp3

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

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Move to more efficient buildings

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Increasing the energy efficiency of buildings can bring reductions in facility energy costs. Energy saving measures are done primarily for business reasons like cost savings, but also including consideration for climate related risks and opportunities.

We have a global Environmental Management System (EMS) through which we analyze our most significant environmental aspects annually and to find additional sources of effective use of resources. We take into account current and potential future regulatory and other related requirements, stakeholder interest, the size of the environmental impact, related risks and opportunities, and current and potential changes in our business. Our own operations are certified under the ISO 14001:2015 EMS standard. In 2022 the coverage of employees within the scope of that certification was 86%.

Our main climate target is our science-based target (SBT). Our SBT is to reduce greenhouse gas emissions by 50% by 2030 across our value chain (Scope 1, 2 and 3) compared to 2019 emissions. The target is aligned with limiting global warming to 1.5°C. In 2021, we also joined the RE100 initiative, a global initiative led by the Climate Group in partnership with CDP, which brings together the world's most influential businesses committed to 100% renewable electricity. Our RE100 target is to achieve 100% purchased electricity from renewable sources by 2025 to power our offices, R&D labs, and factories. Energy efficiency related actions in our offices and factories to

achieve these targets are on-going, and in 2022 the GHG emissions from our facilities were reduced by 54% compared to the 2019 baseline. In 2022 63% of electricity was renewable in our facilities – on track to achieve our target of 100% renewable electricity in our own facilities by 2025.

Time horizon
Medium-term

Likelihood
Likely

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)
0

Potential financial impact figure – maximum (currency)
36000000

Explanation of financial impact figure
Our energy costs in 2022 amounted to 119 mEUR. Assuming an energy efficiency increase of 30%, our energy costs could be reduced annually by approximately 36 mEUR (0.3* EUR 119 million =EUR 35,70 million). This calculation is provided purely as a sensitivity and should not be interpreted to imply accuracy on the financial impact of the opportunity described.

Cost to realize opportunity
3000000

Strategy to realize opportunity and explanation of cost calculation
Our strategy to realize this opportunity is to implement projects that are designed to improve facility operational efficiency. In 2022, such projects included, for example the utilization of LED lighting at sites within China, Portugal, Poland, Germany and Singapore; the use of partial free cooling in Finland and Belgium and replacement / optimization of cooling towers and chillers in India. In addition, transferring real estate operations to more energy efficient sites in Germany and the US has brought reductions in energy use compared to the previous sites.

In 2022, cost impact of energy efficiency equipment was around 3 mEUR which we consider as the impact to realize opportunity. However, we expect the benefits ultimately outweigh the costs with a net positive financial impact.

Comment

C3. Business Strategy

C3.1

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

Row 1

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

Publicly available climate transition plan
Yes

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

Description of feedback mechanism
Shareholders may exercise their right to speak and ask questions at the Annual General Meeting (AGM).

Frequency of feedback collection
Annually

Attach any relevant documents which detail your climate transition plan (optional)
nokia-people-and-planet-2022-sustainability-report.pdf

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

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

C3.2

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

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

C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios: RCP 2.6	Company-wide	<Not Applicable>	Parameters: Parameters included in our analysis include the likelihood of extreme weather events, risks to health, livelihoods, food security, water supply, cities and economic growth and poverty. We have focused on comparing the emission pathways likely resulting in the warming of 1.5°C and 2.0°C and their potential impacts. Assumptions: Assumptions include e.g. increased likelihood of extreme weather events when the global temperature increases from 1.5°C to 2.0°C, which might impact especially Nokia employees in Asia-Pacific or manufacturing suppliers in East and South East Asia Risks to health, livelihoods, food security, water supply, cities and economic growth. Analytical choices: Our analysis using this scenario is qualitative. The time horizon considered is 3–10 years, covering our long-range planning period and long-term horizon. Value chain segments included in the analysis are direct operations, upstream and downstream.
Transition scenarios: IEA 2DS	Company-wide	<Not Applicable>	Parameters: Parameters included in the scenario include the development of the energy mix and carbon intensity of the electricity grid, and the sales mix of our products and their power consumption development. Decarbonization of the ICT sector depends largely on the electricity grid emissions. As the large part of our emissions come from the customer use of sold products that use electricity, the grid carbon intensity is one of the most important factors in our analysis. Assumptions: Assumptions include rapid decarbonization pathway in line with international policy goals and 2°C of global warming, with grid carbon intensity reaching ~250 gCO2e/kWh in 2030. Analytical choices: Our analysis using this scenario is quantitative. The time horizon considered for the energy mix development, carbon intensity of the electricity grid and our product sales mix and power consumption is until 2030. Value chain segments included in the analysis are direct operations, upstream and downstream.
Transition scenarios: IEA B2DS	Company-wide	<Not Applicable>	Parameters: Parameters included in the scenario include the development of the global energy mix, carbon intensity of the electricity grid, and the sales mix of our products and their power consumption development. Decarbonization of the ICT sector depends largely on the electricity grid emissions. As the large part of our emissions come from the customer use of sold products that use electricity, the grid carbon intensity is one of the most important factors in our analysis. Assumptions: Assumptions include the energy sector reaching carbon neutrality by 2060, and grid carbon intensity reaching ~230 gCO2e/kWh by 2030. Analytical choices: Our analysis using this scenario is qualitative. The time horizon considered for the energy mix development, carbon intensity of the electricity grid and our product sales mix and power consumption is until 2030. Value chain segments included in our analysis are direct operations, upstream and downstream.

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

Focal questions addressed in our scenario analysis included, for example:

1. What are the most significant potential gaps in achieving our 1.5C climate targets/transitioning to a 1.5C world?
2. In which areas of our business and operations are the largest acceleration needs and potential for emission reduction?

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

1. Decarbonization of the global electricity grid is beyond our control, and in case the speed of grid decarbonization lags significantly behind from the 2DS and B2DS scenarios, it may pose a challenge for our transition to a 1.5°C world.

2. The largest part of our emissions come from the customer use of sold products (scope 3, category 11), so investing in product energy efficiency in R&D activities is crucial for achieving our scope 3 emission reductions. In addition, recognizing customer uptake of green electricity to operate the networks could accelerate our alignment with a 1.5°C world. Currently, we calculate our scope 3, category 11 emissions by applying global average grid emissions, and do not collect information on the potential customer purchases of green electricity certificates. These are the two most significant areas with potential and need for emission reduction. On the other hand, there are areas where emission reduction possibilities are more limited, such as our marine fleet related to our subsea cables business.

We have used the results of the scenario analysis as a basis for setting our 1.5°C aligned science-based emission reduction target (SBT) and planning related actions on different areas of operations, including investment in the development of more energy efficient solutions and setting short and medium targets that support the achievement of our SBT by 2030. We have also made a decision to purchase more renewable electricity and to join the RE100 initiative where our target is to purchase 100% renewable electricity across Nokia facilities, including offices, R&D labs and factories by 2025.

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	Our products play a growing critical role in helping other industries, particularly asset intensive industries and broader society to decarbonize and increase efficiency that reduces waste of natural resources. This is our handprint. Digitalization and enhanced connectivity provided by our solutions support industry verticals from manufacturing, logistics, and transportation in reaching their sustainability goals and can help enable their net zero pathway. Our solutions support the energy industry's transition and help the agricultural sector bring in more sustainable practices. Our handprint provides our greatest mid to long-term opportunity. On our footprint, customer demand for products and services that generate lower emissions is identified as an opportunity with medium- and long-term impact. For mobile service providers, a major part of their carbon emissions come from the radio access network. A case example of one of the most substantial strategic decisions made in this area, that have been influenced by climate-related risks and opportunities, is the development of energy efficient products such as our AirScale radio products and more power efficient chip sets (FP5). Our climate-related risk and opportunity analysis has also influenced our target setting: we have set a target to achieve 50% reduction of average power consumption of 5G mMIMO Base Station by 2023 from 2019 baseline. On the group level we have set a Science Based Target to halve our emissions across scope 1, 2 and 3 between 2019–2030, covering close to 100% of our product portfolio. Our AirScale radio base station solution (BTS) spearheads our commitment to help our customers build a sustainable business supported by a zero emissions network. Innovative hardware and intelligent software cut base station energy consumption. Over 150 customers have installed energy efficiency software features to our products, and over 60% of our radio products in the field had one or more energy efficiency software features activated. Due to continued demand for connectivity and capacity, our Network Infrastructure (NI) Business Group continues investment in products such as our own silicon (FP5, PSE-Vs/6, Quillion) Systems and advanced SW that drastically reduce power consumption. IP Network FP5 chip sets achieve up to 75% reduction in power consumption over previous generations.
Supply chain and/or value chain	Yes	Increase in energy cost has been identified as a potential risk with medium- and long-term impact. In 2022, 481 (441 in 2021) of our key suppliers representing 64% of our total procurement spend, responded to CDPs request to disclose their climate performance information. All suppliers whose CDP performance was below expectations were provided with improvement requirements and recommended on next priorities. This engagement with our suppliers on climate change is a case example of one of the most substantial strategic decisions made in this area that have been influenced by the climate-related risks and opportunities. It has impacted both Nokia and our suppliers' cost and workload.
Investment in R&D	Yes	Energy efficiency of products has been identified as an important topic and an opportunity with medium- and long-term impact. Our Design for Environment (DfE) R&D helps to ensure we create all technologies that incorporate environmentally sustainable principles. A case example of the most substantial strategic decisions made in this area that have been influenced by the climate-related risks and opportunities include the development of new more energy efficient hardware and software, such as our ReefShark chipset, FP5, Quillion and PSE-V.
Operations	Yes	A case example of the most substantial strategic decisions made in this area that have been influenced by the climate-related risks and opportunities include setting our climate-related targets. We have set a Science Based Target to reduce GHG emissions across scope 1, 2, and 3 by 50% by 2030 (base year 2019), and an additional target to purchase electricity only from renewable sources by 2025 to power our offices, R&D labs, and factories, aligned with the requirements of the RE100 initiative.

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	Revenues Indirect costs	In 2022, 95% of our greenhouse gas emissions came from products in use by our customers in their networks. Our own operations only accounted around 1% of our footprint and has so far been less prone to suffer from climate change-related natural catastrophes and severe weather. As a result, climate-related issues manifest themselves in Nokia through product competitiveness and, as one of the many factors impacting product competitiveness, their impact on revenue is difficult to quantify to the extent it would have a clear impact in the financial planning process. A case study example of how climate-related risks and opportunities have influenced our financial planning indirectly include e.g. significant new product introductions and related investments such as ReefShark chipset and AirScale radio products. Significant product introductions are taken into consideration in the planning process in case they have significant impact on the sales margin development. However, so far it has not been feasible to specify the climate change related product revenue risks and opportunities and therefore are not separately recognized in the financial planning. Climate change-related product development is covered through our R&D spending (EUR 4,5 billion in 2022). Time horizons covered by the financial planning is our annual plan and long range forecast, i.e. covering the current year and 3-year time horizons. Energy saving measures have some impact on operating costs and cost savings – for example in our facilities we speak about some millions of EUR annual impact (less than 30 MEUR). These activities are done for business reasons like savings in energy costs and reducing our carbon footprint. Time horizon covered is the annual financial planning (short-term).

C3.5

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

	Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	No, but we plan to in the next two years	<Not Applicable>

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

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
1.5°C aligned

Year target was set
2021

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2
Scope 3

Scope 2 accounting method
Market-based

Scope 3 category(ies)
Category 1: Purchased goods and services
Category 4: Upstream transportation and distribution
Category 11: Use of sold products

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
124992

Base year Scope 2 emissions covered by target (metric tons CO2e)
327246

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
74996

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
303630

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
34129826

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
34508452

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
34960690

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
2

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
100

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
97

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
88

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
88

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]
17480345

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
124040

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
135343

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
45983

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
329778

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
36991654

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
37367415

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
37626797

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
-15.2520273484305

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
Our SBT is to reduce greenhouse gas emissions by 50% by 2030 across our value chain (Scope 1, 2 and 3) compared to 2019 emissions.

This recalibrated target was accepted by the Science Based Targets initiative in March 2021 and is aligned with limiting global warming to 1.5°C, replacing our original science-based targets set in 2017. The baseline year for our updated SBT is 2019 and reported emissions in the base year were 34.961 million metric tons CO2e.

The target applies to our Scopes 1, 2 and 3 emissions, and covers the following activities:
• Scope 1: emissions from our facilities, car fleet and marine fleet
• Scope 2: market-based emissions from purchased energy
• Scope 3: emissions from the customer use of sold products (covering almost 100% of our current portfolio) and emissions from the logistics and the final assembly factories in our supply chain

Please note, scope 3 categories 4&9 are reported as one data point under category 4. Hence category 9 is covered by target under category 4. Upstream and downstream emissions include emissions from transportation paid by Nokia.

Plan for achieving target, and progress made to the end of the reporting year
Total emissions remained at the same level as in 2021. However, we do not expect the reduction of emissions in our value chain to be a linear process. We aim to achieve our target of 50% reduction in emissions by 2030 as we expect to see greater impact as more energy efficient products and features of our portfolio are adopted and decarbonization of the electricity grid continues globally.

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

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2020

Target coverage
Site/facility

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2020

Consumption or production of selected energy carrier in base year (MWh)
892879

% share of low-carbon or renewable energy in base year
39

Target year
2025

% share of low-carbon or renewable energy in target year
100

% share of low-carbon or renewable energy in reporting year
63

% of target achieved relative to base year [auto-calculated]
39.344262295082

Target status in reporting year
Underway

Is this target part of an emissions target?
Nokia joined to RE100 and our target is to use 100% renewable electricity in our own operations by 2025.
Use of renewable energy is also part of Nokia's tools to achieve SBT target.
Increasing the share of renewable electricity in the total purchased electricity supports us in achieving our Science-based target .
Our new target for 2023 is to achieve at least 75% utilisation of renewable electricity compared to total purchased electricity.

Is this target part of an overarching initiative?
RE100
Science Based Targets initiative

Please explain target coverage and identify any exclusions
Increasing the share of renewable electricity in the total purchased electricity supports us in achieving our Science-based target for Nokia and RE100 target for Scope 2.
In November 2021, we committed to use 100% renewable electricity in our facilities by 2025, aligning with the requirements of the RE100 initiative. Our RE100 target included our offices, R&D labs, and factories.

Plan for achieving target, and progress made to the end of the reporting year
In 2022, electricity consumption across our facilities increased 1% compared to 2021. 63% (53% in 2021) of total consumed electricity came from renewable sources and our Scope 2 market-based emissions decreased by 40% from 2021 levels.

We aim to reach 100% purchased electricity from renewable sources by 2025 across our facilities. This covers our offices, laboratories and our own final assembly factories. This target is aligned with the RE100 initiative. The RE100 initiative is the global corporate renewable energy initiative bringing together hundreds of large and ambitious businesses committed to 100% renewable electricity. In September 2022, we were recognized as the best newcomer by RE100, the Climate Group and CDP for our work on renewables.

List the actions which contributed most to achieving this target
<Not Applicable>

Target reference number
Low 2

Year target was set
2021

Target coverage
Site/facility

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2021

Consumption or production of selected energy carrier in base year (MWh)
891541

% share of low-carbon or renewable energy in base year
53

Target year
2022

% share of low-carbon or renewable energy in target year
60

% share of low-carbon or renewable energy in reporting year
63

% of target achieved relative to base year [auto-calculated]
142.857142857143

Target status in reporting year
Achieved

Is this target part of an emissions target?
Increasing the share of renewable electricity in the total purchased electricity supports us in achieving our Science-based target .
Our new target for 2023 is to achieve at least 75% utilisation of renewable electricity compared to total purchased electricity.

Is this target part of an overarching initiative?
RE100
Science Based Targets initiative

Please explain target coverage and identify any exclusions
In 2022, electricity consumption across our facilities increased 1% compared to 2021. 63% (53% in 2021) of total consumed electricity came from renewable sources and our Scope 2 market-based emissions decreased by 40% from 2021 levels.

Plan for achieving target, and progress made to the end of the reporting year
<Not Applicable>

List the actions which contributed most to achieving this target
Total energy use across our real estate portfolio was 3% higher compared to 2021. Nokia sites employing renewable electricity in 2022 were located in the following countries: Australia, Austria, Belgium, Bulgaria, Canada, China, Denmark, Finland, France, Germany, India, Ireland, Italy, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK, and the USA.

In 2022, our existing wind power purchase agreement for our Chennai factory in India was boosted by a new 3 600 panel rooftop solar plant. At our Horizonte building in Portugal, 610 new solar panels on top of the employee car park are now generating 18% of all the electricity used in the building. At our flagship factory in Oulu, Finland we have added renewable district heating to the existing purchase of renewable electricity.

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	36	
To be implemented*	6	115129
Implementation commenced*	17	808129
Implemented*	15	6744
Not to be implemented	3	

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 buildings	Building Energy Management Systems (BEMS)

Estimated annual CO2e savings (metric tonnes CO2e)
275.31

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
35450

Investment required (unit currency – as specified in C0.4)
23986

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Building Energy Management Systems (BEMS)

Estimated annual CO2e savings (metric tonnes CO2e)
68.83

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
13200

Investment required (unit currency – as specified in C0.4)
0

Payback period
No payback

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)
1777.55

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
258769

Investment required (unit currency – as specified in C0.4)
510000

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)
1212.3

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
166225

Investment required (unit currency – as specified in C0.4)
827000

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
1077.79

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
134729

Investment required (unit currency – as specified in C0.4)
188922

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
247.52

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
53046

Investment required (unit currency – as specified in C0.4)
294403

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Maintenance program

Estimated annual CO2e savings (metric tonnes CO2e)
194.3

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
58921

Investment required (unit currency – as specified in C0.4)
3700

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Maintenance program

Estimated annual CO2e savings (metric tonnes CO2e)
533.46

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
107000

Investment required (unit currency – as specified in C0.4)
600000

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Low-carbon energy consumption	Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)
1306.44

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
40000

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

0

Payback period
No payback

Estimated lifetime of the initiative
6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)
50.34

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
26400

Investment required (unit currency – as specified in C0.4)
0

Payback period
No payback

Estimated lifetime of the initiative
6-10 years

Comment

C4.3c

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

Method	Comment
Dedicated budget for other emissions reduction activities	We have renewable energy purchase contracts for 1-3 years at a time.
Other	Our facilities continue to improve on sustainability requirements and guidelines during construction projects and major renovations. These requirements include e.g. specific targets, increased energy sub-metering and energy efficient equipment.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Group of products or services

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

Type of product(s) or service(s)

Other	Other, please specify (ICT solutions)

Description of product(s) or service(s)
ICT solutions that are predominantly aimed at the provision of data and analytics enabling GHG emission reductions (EU taxonomy activity 8.2. contribution to climate mitigation)

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

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?
No

Name of organization(s) acquired, divested from, or merged with
<Not Applicable>

Details of structural change(s), including completion dates
<Not Applicable>

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	No	<Not Applicable>

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

Scope 1

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)
124374

Comment

Scope 2 (location-based)

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)
599817

Comment

Scope 2 (market-based)

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)
554560

Comment
18% renewable electricity employed

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)
2700000

Comment
This data for Nokia Group. Other base year data for comparable combined company (Nokia Group + former Alcatel Lucent).

Scope 3 category 2: Capital goods

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)
375703

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)

Comment
Fuel and energy related activities not included in Scope 1 and 2: not presently being assessed, because emissions are by calculation less than 0.1% of total Scope 3 emissions.

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)
404208

Comment
Please note category 9 is included into category 4. Category 4 includes upstream and downstream transportation paid by Nokia.

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)

Comment
Waste generated in operations: not assessed annually because in our Scope 3 screening, these emissions were calculated to represent less than 0.1% of our total Scope 3 emissions.

Scope 3 category 6: Business travel

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)
135574

Comment

Scope 3 category 7: Employee commuting

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)
185741

Comment

Scope 3 category 8: Upstream leased assets

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)

Comment
Upstream leased assets: not presently being assessed as leased vehicles and facilities are presently assessed in Scope 1 emissions.

Scope 3 category 9: Downstream transportation and distribution

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)

Comment
Please note category 9 is included into category 4. Category 4 includes upstream and downstream transportation paid by Nokia.

Scope 3 category 10: Processing of sold products

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)

Comment
Processing of sold products: not considered relevant because processing is not required for sold Nokia products.

Scope 3 category 11: Use of sold products

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)
41310000

Comment

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

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)

Comment
End-of-life treatment of sold products: not considered relevant. Based on our life cycle analysis, the use-phase accounts for 89–95% of global warming potential, production (supply chain and own operations) for 5–10%, logistics for 1–2% and end-of-life treatment approximately 1%. Therefore, this category is not considered relevant for reporting in Scope 3 GHG inventory assessments.

Scope 3 category 13: Downstream leased assets

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)

Comment
Downstream leased assets: not presently being assessed because emissions are by calculation less than 0.1% of total Scope 3 emissions.

Scope 3 category 14: Franchises

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)

Comment
Franchises: not applicable, as Nokia does not have franchises.

Scope 3 category 15: Investments

Base year start
January 1 2014

Base year end
December 31 2014

Base year emissions (metric tons CO2e)

Comment
Investments: not applicable, Nokia has invested in some companies but has no operational control. In line with our approach with financial accounting these are not consolidated in our environmental reporting either.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance
Other, please specify (Corporate value chain (Scope 3), Accounting and reporting standard, Supplement to the GHG Protocol corporate accounting and reporting standard)

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)
124040

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Year / tCO2e
2022 / 124,404
2021 / 124,254
2020 / 116,268
2019 / 124,992

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based
354752

Scope 2, market-based (if applicable)
135343

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Year / location-based / market-based
2021 / 377,325 / 224,453
2020 / 380,223 / 263,604
2019 / 421,941 / 327,246

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?
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)
683721

Emissions calculation methodology
Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
63

Please explain
Purchased goods and services: emissions are reported based on data collected with CDP Climate Survey from Nokia's biggest suppliers, and directly from our final assembly suppliers, representing 63% of total purchase spend in 2022 (64% in 2021). We use a hybrid method, using emissions allocated for Nokia by the suppliers and also intensity based (GHG/€) allocation, where allocated emissions were not available, or allocation was not reliable based on different internal quality measures. Collected data is then aggregated to represent 100% of spend. In 2022 calculation we included only suppliers' Scope 1 and 2 emissions, not Scope 3 emissions. To avoid double counting, following data is excluded from this category: Scope 1 (emissions from car fleet and marine fleet) and Scope 3 category 4 and 9 (upstream and downstream transportation and distribution), and category 6 (business air travel). 2022 disclosure is based on the latest CDP data representing suppliers' year 2020 emissions. We recognize that this emission category includes a lot of uncertainty, as suppliers have variable quality in their own reporting and in allocating emissions to Nokia.

Capital goods

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
444789

Emissions calculation methodology
Spend-based method

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

Please explain
Capital goods: the relevance of emissions from this category to be included in the Scope 3 inventory is assessed each year, as capital goods purchases vary from year to year. The threshold for inclusion is 0.5% of total Scope 1, 2 and 3 emissions. Emissions from capital goods are based on financial data on property, plant, and equipment additions during the reporting year and estimated by using the GHG Protocol Scope 3 Evaluator tool.

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

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
9600

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
82

Please explain
Fuel and energy related activities not included in Scope 1 and 2: not presently being reported in our sustainability report People & Planet, because emissions are by calculation less than 0.1% of total Scope 3 emissions.

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
329778

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Upstream (category 4) and downstream (category 9) transportation and distribution: Data includes emissions from inbound and outbound logistics. Data is based on the top 19 (16 in 2021) logistics supply partners delivery data (ton-km) and transportation mode. Reporting is done in real weight, by using EPA's CO2e emission factors or logistics supplier own factors. Upstream emissions include emissions from transportation paid by Nokia.

Waste generated in operations

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
7900

Emissions calculation methodology
Average data method

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

Please explain
Waste generated in operations: not reported in our sustainability report People & Planet annually because in our Scope 3 screening , these emissions were calculated to represent less than 0.1% of our total Scope 3 emissions.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
26667

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Business travel: emissions are reported for business air travel, which has the biggest impact out of all business travel modes. Travel information is obtained from our assigned Travel Agencies. Supplied data includes distance traveled, delineated by flight distance ranges and cabin class. Data from travel agencies is consolidated in a system which is used to calculate emissions from air travel. Emissions factors are obtained from EPA.

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
50085

Emissions calculation methodology
Distance-based method

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

Please explain
Employee commuting: We conducted an employee commuting survey in 2018. Survey results are a representative sample from several countries. Those results are extrapolated to represent commuting of all employees for 2018–2022 emissions. For 2020–2022, share of commuting methods was adjusted based on allowed occupancy at Nokia sites during global COVID-19 restrictions and additionally for 2022, flexible working method.

Upstream leased assets

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
0

Emissions calculation methodology
Other, please specify (included into scope 1&2 reporting)

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

Please explain
Upstream leased assets: not presently being reported in our sustainability report People & Planet as leased vehicles and facilities are presently assessed in Scope 1 and 2 emissions.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
0

Emissions calculation methodology
Other, please specify (reported together with category 4)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Scope 3, cat 9, downstream transportation and distribution is not reported separately but reported together with Scope 3, cat 4, upstream transportation and distribution data.

Processing of sold products

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
0

Emissions calculation methodology
Other, please specify (not considered relevant because processing is not required for sold Nokia products)

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

Please explain
Processing of sold products: not considered relevant in our sustainability report People & Planet as Nokia does not make intermediate products that are then sold to other customers and processed into other products.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
37919153

Emissions calculation methodology
Methodology for direct use phase emissions, please specify (electricity consumed from use of sold products)

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

Please explain
Use of sold products: The calculation formula is following: Σ [total lifetime expected uses of products (hours) x number of products sold in reporting period x product power consumption (kW) x emission factor for electricity (kg CO2e/ kWh)]. Data covers hardware products from Nokia's Network business groups. Product use time varies between 6 and 15 years, depending on the products. Energy use calculations are based on product group specific standards, for example, by ETSI, wherever standards have been published. The objective is to have a product coverage above 80%; in 2022 coverage is 98%. Calculations are based on assumption that all products are powered by grid electricity. Data is rounded to thousands until 2021 and hundreds from 2022. We use the IEA's latest world average CO2e emission factor available in the beginning of the reporting year.

End of life treatment of sold products

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
370900

Emissions calculation methodology
Other, please specify (product LCA)

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

Please explain
End-of-life treatment of sold products: not considered relevant in our sustainability report People & Planet. Based on our life cycle analysis, the use-phase accounts for 89–95% of global warming potential, production (supply chain and own operations) for 5–10%, logistics for 1–2% and end-of-life treatment less than 1%. Therefore, this category is not considered relevant for reporting in Scope 3 GHG inventory assessments.

Downstream leased assets

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
9700

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Downstream leased assets: not presently being reported in our sustainability report People & Planet because emissions are by calculation less than 0.1% of total Scope 3 emissions. Calculation for sub leased facilities contains both owned and leased facilities excluded from scope 1 and 2 reporting.

Franchises

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
0

Emissions calculation methodology
Other, please specify (not applicable, as Nokia does not have franchises)

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

Please explain
Franchises: not applicable, as Nokia does not have franchises.

Investments

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
0

Emissions calculation methodology
Other, please specify (not applicable, as category 15 is designed primarily for financial institutions and other entities with investments not included in Scope 1 and Scope 2)

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

Please explain
Investments: not applicable, as category 15 is designed primarily for financial institutions and other entities with investments not included in Scope 1 and Scope 2. This is not applicable for Nokia in 2022. Environmental reporting follows the financial reporting practices of consolidation.

Other (upstream)

Evaluation status

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

Other (downstream)

Evaluation status

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

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.000010412

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
259383

Metric denominator
unit total revenue

Metric denominator: Unit total
24911000000

Scope 2 figure used
Market-based

% change from previous year
34

Direction of change
Decreased

Reason(s) for change
Change in renewable energy consumption

Please explain
The change is due to emission reduction activities, including increased purchases for renewable energy.
2020: 0.000017384 tCO2e/euro
2021: 0.000015706 tCO2e/euro
2022: 0.000010412 tCO2e/euro
[(0.000010412-0.000015706)/0.000015706]*100 = -34%

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	123362.63	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	53.32	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	12.84	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	611.58	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
Asia Pacific (or JAPA)	157.577
Europe	4081.884
India	321.794
China	255.262
Latin America (LATAM)	1.351
Africa and Middle East	41.278
North America	19450.223
Other, please specify (Worldwide) *Includes company lease fleet and marine vessels*	99731.002

C7.3

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

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Emissions from combustion of gasoline in facility-associated mobile vehicles	26.959
Emissions from combustion of propane in facility-associated mobile vehicles	2.925
Emissions from combustion of natural gas in facility operations	16834.728
Emissions from combustion of diesel and fuel oil in facility operations	647.986
Emissions from combustion of LPG in facility operations	227.076
Emissions from fuel cell employing natural gas to generate electricity	5938.481
Emissions from refrigerant leaks (HFC407c)	609.275
Emissions from fire-fighting activities (CO2)	0.071
Emissions from combustion of fuel in marine fleet	77282.002
Emissions from fuel combustion in car fleet	22449
Emissions from fuel combustion of diesel and fuel oil in facility-associated mobile vehicles	19.564
Emissions from refrigerant leaks (HFC410a)	2.308

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Asia Pacific (or JAPA)	13394.192	13257.174
Europe	106919.336	65919.471
Latin America (LATAM)	942.203	942.203
Africa and Middle East	1624.859	1624.859
China	77717.266	2817.346
North America	84345.916	28137.798
India	69808.169	22643.828

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.
By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Emissions from purchased electricity	339587.247	121934.079
Emissions from purchased chilled water	4125.284	4125.284
Emissions from District Cooling	4425.563	4425.563
Emissions from District Heating	6321.486	4565.392
Emissions from purchased steam	102.751	102.751

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?
No

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?
Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	70713	Decreased	20	As a direct result of the increased consumption of renewable electricity in 2022, an additional 70,713 tCO2e was reduced when compared to the reduction seen in 2021 from consumption of renewable electricity. Comparing this reduction to 2021 total Scope 1 and Scope 2 emissions (348,707 tCO2e), emissions were reduced by 20% in 2022. 2021 purchase of renewable electricity: 469,627 MWh resulting in 192,116 tCO2e reduction. 2022 purchase of renewable electricity: 572,640 MWh resulting in 262,830 tCO2e reduction. (262,830 tCO2e - 192,116 tCO2e) / 348,707 tCO2e * 100 = 20%
Other emissions reduction activities	18610.94	Decreased	5.3	As a result of other emissions and reduction initiatives implemented during the year, emissions were reduced by 18,610.940 tCO2e. Comparing this reduction to 2021 total Scope 1 and 2 emissions (348,707.442 tCO2e), emissions were reduced by 5.3% in 2022. 2022 vs 2021 tCO2e emissions: Car Fleet energy decrease: (22,449 tCO2e - 24,419 tCO2e) = -1,970 tCO2e Chilled Water usage decrease: (4,125.285 tCO2e - 4,344.462 tCO2e) = -219.177 tCO2e District Cooling usage decrease: (4,425.563 tCO2e - 4,583.592 tCO2e) = -158.028 tCO2e District Heating usage decrease: (4,565.392 tCO2e - 7,502.627 tCO2e) = -2,937.235 tCO2e Fire Extinguisher usage decrease: (0.071 tCO2e - 0.757 tCO2e) = -0.686 tCO2e Fuel cell natural gas usage increase: (5,938.481 tCO2e - 197.673 tCO2e) = 5,740.807 tCO2e HFC407c release increase: (609.275 tCO2e - 349.946 tCO2e) = 259.329 tCO2e HFC410a release increase: (2.308 tCO2e - 0) = 2.308 tCO2e Marine Fleet energy decrease: (77,282.002 tCO2e - 81,069.492 tCO2e) = 3,787.490 tCO2e Mobile - Diesel fuel increase (19.564 tCO2e - 0) = 19.564 tCO2e Mobile - Gasoline fuel decrease: (26.959 tCO2e - 53.816 tCO2e) = -26.857 tCO2e Mobile - Propane gas increase: (2.925 tCO2e - 2.905 tCO2e) = 0.019 tCO2e Purchased Electricity usage decrease: (384,764.175 tCO2e - 400,043.133 tCO2e) = -15,287.289 tCO2e Self-Generated Solar increase = (189.610 tCO2e - 0) = 189.610 tCO2e Stationary - Diesel fuel increase: (647.986 tCO2e - 248.192 tCO2e) = 399.795 tCO2e Stationary - LPG usage increase: (227.076 tCO2e - 273.210 tCO2e) = -46.134 tCO2e Stationary - Natural Gas usage decrease: (16,834.729 tCO2e - 17,639.110 tCO2e) = -804.381 tCO2e Steam usage increase: (102.752 tCO2e - 96.176 tCO2e) = 6.576 tCO2e Total change: [(-1,970)+(-219.177)+(-158.028)+(-2,937.235)+(-0.686)+(5,740.807)+(259.329)+(2.308)+(3,787.490)+(19.564)+(-26.857)+(0.019)+(-15,287.289)+(399.795)+(-46.134)+(-804.381)+(6.576)] = -18,610.940 tCO2e % tCO2e Change: (-18,610.940 tCO2e / 348,707.442 tCO2e) *100 = -5.3%
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
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?
Market-based

C8. Energy

C8.1

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

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
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)	0	129691.07	129691.07
Consumption of purchased or acquired electricity	<Not Applicable>	572640.37	323965.94	896606.33
Consumption of purchased or acquired heat	<Not Applicable>	7923.51	19978.55	27902.06
Consumption of purchased or acquired steam	<Not Applicable>	0	453.53	453.53
Consumption of purchased or acquired cooling	<Not Applicable>	0	39267.54	39267.54
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	226.81	<Not Applicable>	226.81
Total energy consumption	<Not Applicable>	580790.71	513356.64	1094147.34

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	Yes
Consumption of fuel for co-generation or tri-generation	No

C8.2c

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

Sustainable biomass

Heating value

LHV

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

0

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

No sustainable biomass consumed in 2022

Other biomass

Heating value
LHV

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
No other biomass consumed in 2022

Other renewable fuels (e.g. renewable hydrogen)

Heating value
LHV

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
No other renewable fuels consumed in 2022

Coal

Heating value
LHV

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
No coal consumed in 2022

Oil

Heating value
LHV

Total fuel MWh consumed by the organization
2745.69

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
2218.53

MWh fuel consumed for self-generation of steam
527.16

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
Total oil (diesel and gasoline) consumed by the organisation was 2,745.69 MWh. This includes fuel oils consumed in facility-associated mobile and stationary sources and does not include fuel oils consumed by our marine vessels or car fleet activities.
Diesel: 2,635.79 MWh - 100% of energy was consumed in heating buildings (80% consumed for heat versus 20% for steam generation)
Gasoline: 109.91 MWh - 100% consumed in facility-associated mobile sources

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
126945.38

MWh fuel consumed for self-generation of electricity
32964.52

MWh fuel consumed for self-generation of heat
67970.75

MWh fuel consumed for self-generation of steam
16720.78

MWh fuel consumed for self-generation of cooling
9289.32

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
Total gas energy consumed by the organisation was 126,945.38 MWh. This includes fuel gas consumed in facility-associated mobile and stationary sources.
Natural Gas (Fuel Cell): 32,964.52 MWh - 100% of energy consumed by fuel cell was used to generate electricity for the facility
Natural Gas: 92,893.22 MWh - 90% of energy was consumed to heat buildings (80% employed for heat versus 20% for steam generation) and 10% to operate absorption chillers
LPG: 1,074.19 MWh - 100% of energy was consumed in heating buildings
Propane: 13.45 MWh - 100% of energy was consumed in facility-associated mobile sources

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

Heating value
LHV

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
No other non-renewable fuels consumed in 2022

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
129691.07

MWh fuel consumed for self-generation of electricity
32964.52

MWh fuel consumed for self-generation of heat
70189.29

MWh fuel consumed for self-generation of steam
17247.94

MWh fuel consumed for self-generation of cooling
9289.32

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
Fuel usage assessment encompasses 100% of facility mobile and stationary operations. It does not include global marine vessels and car fleet operations.

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	17608.61	17608.61	226.81	226.81
Heat	56050.52	56050.52	0	0
Steam	13773.55	13773.55	0	0
Cooling	7418.1	7418.1	0	0

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area
Albania

Consumption of purchased electricity (MWh)
1.28

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.28

Country/area
Algeria

Consumption of purchased electricity (MWh)
3.76

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3.76

Country/area
Angola

Consumption of purchased electricity (MWh)
0.23

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.23

Country/area
Argentina

Consumption of purchased electricity (MWh)
259.75

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
259.75

Country/area
Armenia

Consumption of purchased electricity (MWh)
7.44

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
7.44

Country/area
Australia

Consumption of purchased electricity (MWh)
2192.71

Consumption of self-generated electricity (MWh)
275.68

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2468.39

Country/area
Austria

Consumption of purchased electricity (MWh)
573.87

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
10.5

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
584.37

Country/area
Azerbaijan

Consumption of purchased electricity (MWh)
26.36

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
26.36

Country/area
Bangladesh

Consumption of purchased electricity (MWh)
65.12

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
65.12

Country/area
Belarus

Consumption of purchased electricity (MWh)
0.66

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.66

Country/area
Belgium

Consumption of purchased electricity (MWh)
16377.86

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
16377.86

Country/area
Benin

Consumption of purchased electricity (MWh)
0.29

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.29

Country/area
Bolivia (Plurinational State of)

Consumption of purchased electricity (MWh)
0.21

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.21

Country/area
Bosnia & Herzegovina

Consumption of purchased electricity (MWh)
3.44

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3.44

Country/area
Brazil

Consumption of purchased electricity (MWh)
1255.78

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1255.78

Country/area
Brunei Darussalam

Consumption of purchased electricity (MWh)
17.67

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
17.67

Country/area
Bulgaria

Consumption of purchased electricity (MWh)
98.14

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
98.14

Country/area
Burkina Faso

Consumption of purchased electricity (MWh)
1.41

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.41

Country/area
Cambodia

Consumption of purchased electricity (MWh)
0.58

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.58

Country/area

Cameroon

Consumption of purchased electricity (MWh)
46.66

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
46.66

Country/area
Canada

Consumption of purchased electricity (MWh)
73227.66

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
73227.66

Country/area
Chile

Consumption of purchased electricity (MWh)
11.04

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
11.04

Country/area
China

Consumption of purchased electricity (MWh)
119705.8

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
4297.55

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
124003.35

Country/area
Colombia

Consumption of purchased electricity (MWh)
80.46

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
80.46

Country/area
Congo

Consumption of purchased electricity (MWh)
3.17

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3.17

Country/area
Costa Rica

Consumption of purchased electricity (MWh)
0.82

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.82

Country/area
Côte d'Ivoire

Consumption of purchased electricity (MWh)
0.19

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.19

Country/area
Croatia

Consumption of purchased electricity (MWh)
28.21

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
28.21

Country/area
Cuba

Consumption of purchased electricity (MWh)
3.41

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3.41

Country/area
Czechia

Consumption of purchased electricity (MWh)
1.84

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.84

Country/area
Denmark

Consumption of purchased electricity (MWh)
45.33

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
45.33

Country/area
Dominican Republic

Consumption of purchased electricity (MWh)
0.21

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.21

Country/area
Ecuador

Consumption of purchased electricity (MWh)
40.16

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
40.16

Country/area
Egypt

Consumption of purchased electricity (MWh)
626.94

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
626.94

Country/area
El Salvador

Consumption of purchased electricity (MWh)
0.21

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.21

Country/area
Estonia

Consumption of purchased electricity (MWh)
0.63

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.63

Country/area

Ethiopia

Consumption of purchased electricity (MWh)
10.17

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10.17

Country/area
Finland

Consumption of purchased electricity (MWh)
130810.88

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
39818.01

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
170628.89

Country/area
France

Consumption of purchased electricity (MWh)
54119.32

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
54119.32

Country/area
Georgia

Consumption of purchased electricity (MWh)
0.14

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.14

Country/area
Germany

Consumption of purchased electricity (MWh)
33867.15

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
7569.66

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
41436.81

Country/area
Ghana

Consumption of purchased electricity (MWh)
0.46

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.46

Country/area
Greece

Consumption of purchased electricity (MWh)
9930.36

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
9930.36

Country/area
Guatemala

Consumption of purchased electricity (MWh)
1.23

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.23

Country/area
Hong Kong SAR, China

Consumption of purchased electricity (MWh)
6.36

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
6.36

Country/area
Hungary

Consumption of purchased electricity (MWh)
10243.44

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
2524.59

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
12768.03

Country/area
India

Consumption of purchased electricity (MWh)
96181

Consumption of self-generated electricity (MWh)
47.01

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
96228.01

Country/area
Indonesia

Consumption of purchased electricity (MWh)
134.81

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
134.81

Country/area
Iran (Islamic Republic of)

Consumption of purchased electricity (MWh)
11.49

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
11.49

Country/area
Iraq

Consumption of purchased electricity (MWh)
10.96

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10.96

Country/area
Ireland

Consumption of purchased electricity (MWh)
48.93

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
48.93

Country/area
Israel

Consumption of purchased electricity (MWh)
2069.46

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2069.46

Country/area
Italy

Consumption of purchased electricity (MWh)
10261.04

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10261.04

Country/area

Japan

Consumption of purchased electricity (MWh)
9271.66

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
8452.99

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
17724.65

Country/area
Jordan

Consumption of purchased electricity (MWh)
20.24

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
20.24

Country/area
Kazakhstan

Consumption of purchased electricity (MWh)
56.96

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
56.96

Country/area
Kenya

Consumption of purchased electricity (MWh)
82.66

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
82.66

Country/area
Kuwait

Consumption of purchased electricity (MWh)
0.78

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.78

Country/area
Lao People's Democratic Republic

Consumption of purchased electricity (MWh)
4.38

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
4.38

Country/area
Latvia

Consumption of purchased electricity (MWh)
1.52

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.52

Country/area
Lebanon

Consumption of purchased electricity (MWh)
1.48

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.48

Country/area
Libya

Consumption of purchased electricity (MWh)
6.35

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
6.35

Country/area
Lithuania

Consumption of purchased electricity (MWh)
40.1

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
6.35

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
46.45

Country/area
China, Macao Special Administrative Region

Consumption of purchased electricity (MWh)
0

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0

Country/area
Madagascar

Consumption of purchased electricity (MWh)
0.25

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.25

Country/area
Malaysia

Consumption of purchased electricity (MWh)
449.65

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
449.65

Country/area
Mali

Consumption of purchased electricity (MWh)
2.9

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2.9

Country/area
Mauritania

Consumption of purchased electricity (MWh)
1.01

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.01

Country/area
Mexico

Consumption of purchased electricity (MWh)
1728.57

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1728.57

Country/area
Morocco

Consumption of purchased electricity (MWh)
136.9

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
136.9

Country/area

Mozambique

Consumption of purchased electricity (MWh)
0.29

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.29

Country/area
Myanmar

Consumption of purchased electricity (MWh)
28.24

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
28.24

Country/area
Netherlands

Consumption of purchased electricity (MWh)
1456.93

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1456.93

Country/area
New Zealand

Consumption of purchased electricity (MWh)
416.25

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
416.25

Country/area
Niger

Consumption of purchased electricity (MWh)
2.08

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2.08

Country/area
Nigeria

Consumption of purchased electricity (MWh)
449.95

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
449.95

Country/area
Norway

Consumption of purchased electricity (MWh)
391.39

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
391.39

Country/area
Pakistan

Consumption of purchased electricity (MWh)
445.99

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
445.99

Country/area
Panama

Consumption of purchased electricity (MWh)
1.02

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.02

Country/area
Peru

Consumption of purchased electricity (MWh)
72.81

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
72.81

Country/area
Philippines

Consumption of purchased electricity (MWh)
82.23

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
115.84

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
198.07

Country/area
Poland

Consumption of purchased electricity (MWh)
66973.67

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
4748.29

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
71721.96

Country/area
Portugal

Consumption of purchased electricity (MWh)
4996.54

Consumption of self-generated electricity (MWh)
179.8

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
5176.34

Country/area
Puerto Rico

Consumption of purchased electricity (MWh)
0.62

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.62

Country/area
Qatar

Consumption of purchased electricity (MWh)
5.84

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
5.84

Country/area
Romania

Consumption of purchased electricity (MWh)
17179.39

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
17179.39

Country/area
Russian Federation

Consumption of purchased electricity (MWh)
377.21

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
377.21

Country/area

Saudi Arabia

Consumption of purchased electricity (MWh)
211.08

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
211.08

Country/area
Senegal

Consumption of purchased electricity (MWh)
1.25

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.25

Country/area
Serbia

Consumption of purchased electricity (MWh)
27.5

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
27.5

Country/area
Singapore

Consumption of purchased electricity (MWh)
2806.59

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2806.59

Country/area
Slovakia

Consumption of purchased electricity (MWh)
1345.21

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1345.21

Country/area
Slovenia

Consumption of purchased electricity (MWh)
0.48

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.48

Country/area
South Africa

Consumption of purchased electricity (MWh)
531.39

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
531.39

Country/area
Republic of Korea

Consumption of purchased electricity (MWh)
2307.96

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2307.96

Country/area
Spain

Consumption of purchased electricity (MWh)
4749

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
4749

Country/area
Sri Lanka

Consumption of purchased electricity (MWh)
1.74

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1.74

Country/area
Sweden

Consumption of purchased electricity (MWh)
9.12

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
9.12

Country/area
Switzerland

Consumption of purchased electricity (MWh)
675.76

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
675.76

Country/area
Syrian Arab Republic

Consumption of purchased electricity (MWh)
10.05

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
10.05

Country/area
Taiwan, China

Consumption of purchased electricity (MWh)
2938.24

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2938.24

Country/area
United Republic of Tanzania

Consumption of purchased electricity (MWh)
87.16

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
87.16

Country/area
Thailand

Consumption of purchased electricity (MWh)
109.95

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
109.95

Country/area
Togo

Consumption of purchased electricity (MWh)
4.52

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
4.52

Country/area

Tunisia

Consumption of purchased electricity (MWh)
105.36

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
105.36

Country/area
Turkey

Consumption of purchased electricity (MWh)
2017.87

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2017.87

Country/area
Turkmenistan

Consumption of purchased electricity (MWh)
18.36

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
18.36

Country/area
Uganda

Consumption of purchased electricity (MWh)
3.65

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3.65

Country/area
Ukraine

Consumption of purchased electricity (MWh)
47.81

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
47.81

Country/area
United Arab Emirates

Consumption of purchased electricity (MWh)
161.41

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
21

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
182.41

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)
7642.3

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

Consumption of purchased heat, steam, and cooling (MWh)
58.37

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
7700.67

Country/area
United States of America

Consumption of purchased electricity (MWh)
203317.04

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
203317.04

Country/area
Uruguay

Consumption of purchased electricity (MWh)
4.31

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
4.31

Country/area
Uzbekistan

Consumption of purchased electricity (MWh)
4.5

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
4.5

Country/area
Venezuela (Bolivarian Republic of)

Consumption of purchased electricity (MWh)
0.21

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
0.21

Country/area
Viet Nam

Consumption of purchased electricity (MWh)
81.66

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
81.66

Country/area
Yemen

Consumption of purchased electricity (MWh)
3.23

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3.23

Country/area
Zambia

Consumption of purchased electricity (MWh)
3.64

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3.64

C8.2h

(C8.2h) Provide details of your organization's renewable electricity purchases in the reporting year by country/area.

Country/area of consumption of purchased renewable electricity
Australia

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
174

Tracking instrument used
Australian LGC

Country/area of origin (generation) of purchased renewable electricity
Australia

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2022

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Bulgaria

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
98.14

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2003

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Canada

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
31856

Tracking instrument used
Other, please specify (M-RETS)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1972

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
China

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
22458.8

Tracking instrument used
I-REC

Country/area of origin (generation) of purchased renewable electricity
China

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2013

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
China

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
97247

Tracking instrument used
I-REC

Country/area of origin (generation) of purchased renewable electricity
China

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2015

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
India

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
39411

Tracking instrument used
I-REC

Country/area of origin (generation) of purchased renewable electricity
India

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2006

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2021

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United Kingdom of Great Britain and Northern Ireland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
2710

Tracking instrument used
REGO

Country/area of origin (generation) of purchased renewable electricity
United Kingdom of Great Britain and Northern Ireland

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2012

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
25867

Tracking instrument used
Other, please specify (M-RETS)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1972

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
15000

Tracking instrument used
Other, please specify (Ercot)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2021

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
100

Tracking instrument used
Other, please specify (NAR)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2016

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
140

Tracking instrument used
Other, please specify (NAR)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2015

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
9107

Tracking instrument used
Other, please specify (NAR)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2015

Vintage of the renewable energy/attribute (i.e. year of generation)

2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
6812

Tracking instrument used
Other, please specify (NAR)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2018

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
13188

Tracking instrument used
Other, please specify (NAR)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2018

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1281

Tracking instrument used
Other, please specify (NAR)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2016

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Austria

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
573.87

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1971

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Denmark

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
45.33

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1971

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
France

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
4975.73

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1992

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Ireland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
48.93

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2006

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Belgium

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Hydropower (capacity unknown)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
5.05

Tracking instrument used
Contract

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2021

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment
Electricity is supplied via the landlord. Landlords supplier (VREG Energie) confirms electricity is 100% from renewable sources (mainly Hydropower and Onshore wind energy) originating from countries including Norway, Spain, Portugal, Finland, France and Solvenia.

Country/area of consumption of purchased renewable electricity
Netherlands

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1456.93

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2006

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Norway

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
391.39

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2006

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Slovakia

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1295.21

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2010

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Slovenia

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
0.48

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2010

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Sweden

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
9.12

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2010

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Switzerland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
675.76

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Bulgaria

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2003

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
India

Sourcing method
Purchase from an on-site installation owned by a third party (on-site PPA)

Renewable electricity technology type
Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
3124.27

Tracking instrument used
Contract

Country/area of origin (generation) of purchased renewable electricity
India

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2022

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
India

Sourcing method
Physical power purchase agreement (physical PPA) with a grid-connected generator

Renewable electricity technology type
Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
16535.89

Tracking instrument used
Contract

Country/area of origin (generation) of purchased renewable electricity
India

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2018

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2021

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment
The PPA in this situation is between the landlord of our building and the renewable energy facility. Nokia have an agreement with the renewable energy facility (approved by the landlord) stating the end-user (Nokia) is the sole beneficiary of 100% of the green attributes associated with the consumed green electricity as documented monthly by meter readings.

Country/area of consumption of purchased renewable electricity
India

Sourcing method
Physical power purchase agreement (physical PPA) with a grid-connected generator

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
5911.4

Tracking instrument used
Contract

Country/area of origin (generation) of purchased renewable electricity
India

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2018

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2021

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Italy

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
4948

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Spain

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
New Zealand

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
141.1

Tracking instrument used
NZREC

Country/area of origin (generation) of purchased renewable electricity
New Zealand

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1965

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
34955.11

Tracking instrument used
Other, please specify (Ercot)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2019

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2021

Additional, voluntary label associated with purchased renewable electricity
Green-e

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
13094

Tracking instrument used
Other, please specify (NAR)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2022

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2020

Additional, voluntary label associated with purchased renewable electricity
Green-e

Comment

Country/area of consumption of purchased renewable electricity
United States of America

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
20737.94

Tracking instrument used
Other, please specify (Ercot)

Country/area of origin (generation) of purchased renewable electricity
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2018

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Spain

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
4714.91

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Spain

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Poland

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
29785.17

Tracking instrument used
Contract

Country/area of origin (generation) of purchased renewable electricity
Poland

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment
Electricity is supplied via the landlord. Landlords supplier (Energa Orbot) confirms electricity is 100% from renewable sources (wind and solar) originating from within Poland.

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
133

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2007

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
2176

Tracking instrument used

GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2009

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
2205

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2012

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
5771

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2014

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
109

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2015

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Solar

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
230

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2017

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
583

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1998

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
811

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
1999

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1618

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2001

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
237

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2002

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1263

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2003

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1626

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2004

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
5264

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2005

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
25090

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2006

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1853

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2007

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
23037

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2008

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
3725

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2009

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
6038

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2010

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
3123

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2011

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
5201

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2013

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
5197

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2015

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
7400

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2016

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
3611

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2020

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
267

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Portugal

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
846

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Slovenia

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2006

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
7051

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Slovenia

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2009

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
6795

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Slovenia

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2013

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Finland

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
9500

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Slovenia

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2017

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
France

Sourcing method
Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1762.25

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Slovenia

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2017

Vintage of the renewable energy/attribute (i.e. year of generation)
2021

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
4910

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2018

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
7699

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2020

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Large hydropower (>25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
142

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1500

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2016

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1346

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2018

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
2251

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2019

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
1651

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2020

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
629

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Small hydropower (<25 MW)

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
49

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2022

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

Country/area of consumption of purchased renewable electricity
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type
Wind

Renewable electricity consumed via selected sourcing method in the reporting year (MWh)
11064.84

Tracking instrument used
GO

Country/area of origin (generation) of purchased renewable electricity
Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Vintage of the renewable energy/attribute (i.e. year of generation)
2022

Supply arrangement start year
2022

Additional, voluntary label associated with purchased renewable electricity
Other, please specify (HKN NEU100)

Comment

C8.2i

(C8.2i) Provide details of your organization's low-carbon heat, steam, and cooling purchases in the reporting year by country/area..

Sourcing method
Heat/steam/cooling supply agreement

Country/area of consumption of low-carbon heat, steam or cooling
Finland

Energy carrier
Heat

Low-carbon technology type
Sustainable biomass

Low-carbon heat, steam, or cooling consumed (MWh)
7923.51

Comment
Suppliers carbon-neutral district heating is certified with Guarantees of Origin

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C8.2j

(C8.2j) Provide details of your organization's renewable electricity generation by country/area in the reporting year.

Country/area of generation
India

Renewable electricity technology type
Solar

Facility capacity (MW)
0.1

Total renewable electricity generated by this facility in the reporting year (MWh)
47.01

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)
47.01

Energy attribute certificates issued for this generation
No

Type of energy attribute certificate
<Not Applicable>

Comment

Country/area of generation
Portugal

Renewable electricity technology type
Solar

Facility capacity (MW)
0.3

Total renewable electricity generated by this facility in the reporting year (MWh)
179.8

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)
179.8

Energy attribute certificates issued for this generation
No

Type of energy attribute certificate
<Not Applicable>

Comment

C8.2k

(C8.2k) Describe how your organization's renewable electricity sourcing strategy directly or indirectly contributes to bringing new capacity into the grid in the countries/areas in which you operate.

Nokia's sourcing strategy directly contributes to bringing new capacity into the grid through the use of Power Purchase Agreements (PPAs), for example the signing of a PPA in India which contributed to the addition of around 1MWp of solar panels.

In addition, Nokia indirectly contributes to bringing new capacity into the grid by purchasing energy attribute certificates (RECs, GOs) from various countries world-wide providing a global reach that encourages utilities providers to obtain an increased supply of renewable energy from their respective generators. Also, for those leased sites in which the landlord is responsible for supplying utilities, we have had negotiated contracts whereby they have obtained green energy agreements and authorised the construction of on-site solar arrays.

C8.2l

(C8.2l) In the reporting year, has your organization faced any challenges to sourcing renewable electricity?

	Challenges to sourcing renewable electricity	Challenges faced by your organization which were not country/area-specific
Row 1	Yes, not specific to a country/area	We have observed an increased volatility in the price of unbundled renewable attribute certificates. In addition, there are still limitations on the ability to source renewable electricity in some countries where we have a smaller energy consumption, for example in Asia Pacific.

C9. Additional metrics

C9.1

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

Description
Energy usage

Metric value
572867201

Metric numerator
Renewable Electricity Usage (kWh)

Metric denominator (intensity metric only)

% change from previous year
22

Direction of change
Increased

Please explain
2022 renewable electricity consumption versus 2021 renewable electricity consumption increased from 2021 values.
2021 Renewable Electricity Usage: 470,021,102 kWh
2022 Renewable Electricity Usage: 572,867,201 kWh
[(572,867,201 kWh - 470,021,102 kWh)/470,021,102 kWh]*100 = 22%

Description
Energy usage

Metric value
122124

Metric numerator
tons CO2e

Metric denominator (intensity metric only)

% change from previous year
41

Direction of change
Decreased

Please explain
2022 Market-based emissions from purchased electricity decreased by 41% from 2021 values
2021 tons CO2e: 207,926
2022 tons CO2e: 122,124
[(122,124 tons CO2e -207,926 tons CO2e)/207,926 tons CO2e]*100 = -41%

Description
Other, please specify (Total Waste)

Metric value
17164

Metric numerator
metric tons

Metric denominator (intensity metric only)

% change from previous year
103

Direction of change
Increased

Please explain
Operational waste within Nokia contains waste from Nokia facilities (e.g. offices, laboratories, factories) and Nokia product repair operations.
Total operational waste includes reuse, recycle, energy recovery, landfill and incineration without energy recover activities.
Improved Nokia product repair data collection from external repair suppliers in 2022 resulted in increased e-waste data reporting over 2021 data.

2021 total waste: 8,437 metric tons
2022 total waste: 17,164 metric tons
[(17164 tons - 8,437 tons)/8,437 tons] * 100 = 103%

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
nokia-people-and-planet-2022-sustainability-report.pdf

Page/ section reference
page 104, scope 1 data points assured
pages 115-116, independent practitioner's assurance report:
2. Scope 1 greenhouse gas (GHG) emissions, by sources (metric tons CO2e)

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
nokia-people-and-planet-2022-sustainability-report.pdf

Page/ section reference
page 104, scope 2 data points assured
pages 115-116, independent practitioner's assurance report:
3. Scope 2 GHG emissions, market based and location based (metric tons CO2e)

Relevant standard
ISAE3000

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
nokia-people-and-planet-2022-sustainability-report.pdf

Page/ section reference
page 104, scope 2 data points assured
pages 115-116, independent practitioner's assurance report:
3. Scope 2 GHG emissions, market based and location based (metric tons CO2e)

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Purchased goods and services
Scope 3: Upstream 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
nokia-people-and-planet-2022-sustainability-report.pdf

Page/section reference
pages 104-105, scope 3 data points assured:
- Emissions from purchased goods and services
- Emissions from upstream and downstream transportation and distribution
- Emissions from use of sold products

pages 115-116, independent practitioner's assurance report:
1. Progress against Science-based target (SBT)
7. Scope 3 emissions from purchased goods and services
8. Scope 3 emissions from upstream and downstream transportation and distribution
9. Scope 3 GHG emissions: use of sold products

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	International Standard on Assurance Engagements (ISAE) 3000 (Revised)	Nokia has verified its progress against its SBT in 2022. This information is disclosed in Question C4.1.a. References to this verification are found in our People & Planet 2022 report: - pages 104-106, data points assured - pages 115-116, independent practitioner's assurance report of limited assurance on the selected sustainability disclosures in the Nokia's People & Planet 2022 report for the reporting period of January 1, 2022 to December 31, 2022: 1. Progress against Science-based target (SBT)
C8. Energy	Other, please specify (Energy consumption (in GWh) by types of energy, Renewable electricity amount (GWh) and portion of total electricity consumption (%))	International Standard on Assurance Engagements (ISAE) 3000 (Revised)	Nokia has verified its energy consumption (in GWh) by types of energy, renewable electricity amount (GWh) and portion of total electricity consumption (%) in 2022. This information is disclosed in Questions C8.2a, C8.2c, C8.2d and C8.2g. References to this verification are found in our People & Planet 2022 report: - pages 104-106, data points assured - pages 115-116, independent practitioner's assurance report of limited assurance on the selected sustainability disclosures in the Nokia's People & Planet 2022 report for the reporting period of January 1, 2022 to December 31, 2022: 4. Energy consumption within Nokia, by types of energy (GWh) and change to 2021 (%) 5. Renewable electricity amount (GWh) and portion of total electricity consumption (%)
C9. Additional metrics	Other, please specify (Change in energy consumption from 2021)	International Standard on Assurance Engagements (ISAE) 3000 (Revised)	Nokia has verified its change in energy consumption from 2021. This information is disclosed in C9.1. References to this verification are found in our People & Planet 2022 report: - pages 104-106, data points assured - pages 115-116, independent practitioner's assurance report of limited assurance on the selected sustainability disclosures in the Nokia's People & Planet 2022 report for the reporting period of January 1, 2022 to December 31, 2022: 4. Energy consumption within Nokia, by types of energy (GWh) and change to 2021 (%)
C4. Targets and performance	Other, please specify (Change in energy consumption from 2021)	International Standard on Assurance Engagements (ISAE) 3000 (Revised)	Nokia has verified its change in energy consumption from 2021. This information is disclosed in C4.2a (in addition to in C9.1 as detailed above). References to this verification are found in our People & Planet 2022 report: - pages 104-106, data points assured - pages 115-116, independent practitioner's assurance report of limited assurance on the selected sustainability disclosures in the Nokia's People & Planet 2022 report for the reporting period of January 1, 2022 to December 31, 2022: 4. Energy consumption within Nokia, by types of energy (GWh) and change to 2021 (%)
C6. Emissions data	Year on year change in emissions (Scope 3)	International Standard on Assurance Engagements (ISAE) 3000 (Revised)	Nokia has verified its scope 3 data in category 1. Both 2022 data and change to 2021 are verified. References to this verification are found in our People & Planet 2022 report: - pages 104-106, data points assured - pages 115-116, independent practitioner's assurance report of limited assurance on the selected sustainability disclosures in the Nokia's People & Planet 2022 report for the reporting period of January 1, 2022 to December 31, 2022: 7. Scope 3 emissions from purchased goods and services
C6. Emissions data	Change in Scope 3 emissions against a base year (not target related)	International Standard on Assurance Engagements (ISAE) 3000 (Revised)	Nokia has verified its scope 3 data in category 4&9. Both 2022 data and change to 2021 are verified. References to this verification are found in our People & Planet 2022 report: - pages 104-106, data points assured - pages 115-116, independent practitioner's assurance report of limited assurance on the selected sustainability disclosures in the Nokia's People & Planet 2022 report for the reporting period of January 1, 2022 to December 31, 2022: 8. Scope 3 emissions from upstream and downstream transportation and distribution
C6. Emissions data	Year on year change in emissions (Scope 3)	International Standard on Assurance Engagements (ISAE) 3000 (Revised)	Nokia has verified its scope 3 data in category 11. Both 2022 data and change to 2021 are verified. References to this verification are found in our People & Planet 2022 report: - pages 104-106, data points assured - pages 115-116, independent practitioner's assurance report of limited assurance on the selected sustainability disclosures in the Nokia's People & Planet 2022 report for the reporting period of January 1, 2022 to December 31, 2022: 9. Scope 3 GHG emissions: use of sold products (metric tons CO2e)

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)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price
Internal fee

How the price is determined
Other, please specify (Pass through cost of renewable electricity)

Objective(s) for implementing this internal carbon price
Change internal behavior
Drive energy efficiency
Stakeholder expectations

Scope(s) covered
Scope 2

Pricing approach used – spatial variance
Uniform

Pricing approach used – temporal variance
Evolutionary

Indicate how you expect the price to change over time
Price is linked to the actual cost of renewable electricity at time of purchase, so we expect the pricing to evolve year on year depending on the renewable market.

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)
3.34

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)
3.34

Business decision-making processes this internal carbon price is applied to
Operations
Procurement

Mandatory enforcement of this internal carbon price within these business decision-making processes
No

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan
The implementation of this pricing mechanism is enabling us to internally finance the purchase of renewable electricity in line with our target of 100% renewable electricity by 2025. The increased purchase of renewable, enabled by this pricing mechanism, also enables us to be on track for our scope 1 and 2 greenhouse gas emissions target of 65% reduction by 2025 (compared to the 2019 baseline). In addition, as a result of this pricing mechanism, Business Groups are more actively assessing their operations to minimize electricity usage. This includes reviewing their existing occupancy footprints in countries that experience high EAC purchase costs, as well as evaluating projects that minimize energy usage yet exhibit longer return on investment time periods. The intended impact of Nokia's program is to drive down greenhouse gas emissions, increase our investment in energy efficiency projects, as well as guide our business groups in assessing strategic decisions associated with low-carbon opportunities.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers/clients
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect GHG emissions data at least annually from suppliers
Collect targets information at least annually from suppliers
Collect climate-related risk and opportunity information at least annually from suppliers

% of suppliers by number
6

% total procurement spend (direct and indirect)
63

% of supplier-related Scope 3 emissions as reported in C6.5
29

Rationale for the coverage of your engagement
We collect monthly GHG emissions data from all of our final assembly suppliers on a factory level. For the rest of the suppliers we use CDP Supply Chain -program as a means to engage and collect climate performance data from suppliers. CDP Supply Chain data collection was established in 2010 and we have been collecting annual data ever since. To make the greatest impact on GHG emissions caused by Nokia's supply chain, we prioritize suppliers based on three dimensions 1) energy intensity of their sector, 2) strategic relevance and 3) our spend with the suppliers. Related to dimension 1, energy intensive suppliers include e.g. component manufacturers, final assembly, transportation and data centres. Related to dimension 2, we have category strategies and our aim is to have all our “highly ranked”, i.e. "preferred" and "allowed" suppliers covered by CDP and hence CDP covers also non-energy intensive suppliers. We are engaging with these suppliers to maximize our impact: we are targeting suppliers with the highest emissions as well as suppliers with which we have most spend and/or which are strategic to us, i.e. where we can influence most. In 2022 around 5% of our suppliers by number reported to us, covering around 64% of supplier spend and around 4% of emissions of GHG Scope 3 Category 1: Purchased good and services.

Impact of engagement, including measures of success
We measure the success via several CDP program metrics, starting from the number of suppliers responding to CDP up to evolution of the CDP performance score. As a result of the awareness and engagement campaign every year, the amount of the suppliers who disclose climate information through CDP to us is increasing year over year (from 66 in 2012 to 481 in 2022). By getting our suppliers to report their climate data through CDP and going through related awareness campaigns and training, suppliers become more aware of the impact that they have on climate and therefore take a more active stand in reducing their emissions. Various performance indicators such as number of suppliers actually reporting GHG emissions and related savings, number of suppliers purchasing renewable energy and number of suppliers setting emission reduction targets, including in line with Science Based Targets are increasing year on year. As CDP performance score is part of our Supplier Performance evaluation, suppliers are also incentivized in improving their CDP score over time.

Comment
As Nokia has significant Scope 3 emissions under Use of sold products, the share of Purchased goods and services proportion is relatively small (2%), however equally important with our full commitment and dedication behind. Please note percentages above are rounded to be consistent with our ESG report and verification.

Type of engagement
Engagement & incentivization (changing supplier behavior)

Details of engagement
Run an engagement campaign to educate suppliers about climate change
Provide training, support, and best practices on how to set science-based targets
Directly work with suppliers on exploring corporate renewable energy sourcing mechanisms
Climate change performance is featured in supplier awards scheme

% of suppliers by number
6

% total procurement spend (direct and indirect)
65

% of supplier-related Scope 3 emissions as reported in C6.5
29

Rationale for the coverage of your engagement
We have set ambitious targets for our suppliers to cut their emissions by 50% by 2030. That rises to 100% for final assembly suppliers from a 2019 baseline who have the same target as Nokia’s own factories. We have set a more ambitious target to our final assembly suppliers, because they are treated equally to Nokia own factories, and we have greater leverage over their operations. We’re also working with transportation suppliers to help us to bring our logistics emissions down by 73% by 2030. We have set up an annual process of supplier engagement that embraces awareness, raising and good practice sharing, climate data collection and reporting, collaboration on roadmap development, including exploration of best RE opportunities in the markets where suppliers operate their factories, performance evaluation and, recognizing and rewarding great results via our Supplier Diamond Awards.

Impact of engagement, including measures of success
Every year, we host the Nokia Supplier Climate Webinar where we share our expectations, 2030 targets and good practices coming from different stakeholders within Nokia such as R&D, Product energy efficiency innovation, Logistics, Travel and Fleet and Real Estate. This is a great example of how our environmental experts from different Business Units are connecting, consolidating and sharing their insights and learning. The aim is to cultivate good practices across our supplier networks and find inspiring new angles for our suppliers to work on each year.

Follow up on Climate data collection and reporting: We send out an annual climate assessment questionnaire via CDP to over 600 suppliers, supported by practical guidance and sessions on how to measure CO2, how to set SBT based targets, how to allocate emissions and fill out all required information. Following these assessment rounds, results are communicated with suppliers and tailored advice is shared with the next steps, based on their performance. When it comes to our final assembly suppliers, data collection and monitoring take place on a much more stringent monthly basis. Performance and reduction projects track and benchmark impact within our own factories.

Integrating results into performance evaluation and measure of success:
Supplier performance results are embedded into our Supplier Performance Evaluation process. Our suppliers receive scores for sustainability/carbon reduction alongside those for quality, business delivery, relationship, and innovation performance.

Impact of engagement:
An example of impact and positive outcome achieved from this engagement, is for instance the fact that from 2021 to 2022 the number of our suppliers that scored A-C on

CDP has increased from 231 to 306 (similar tendency is observed under all subindicators such as emissions reporting, targets, RE usage, subsupplier engagement etc).

Rewarding and recognizing best examples:
Recognizing great practice is as important as penalizing the bad so Nokia has embedded sustainability/carbon reduction into our Nokia Procurement Diamond Awards which are hosted by our top leadership team, including our CEO. As part of the qualification criteria to Sustainability award, suppliers need to score >B in CDP and submit their specific entry.

Comment

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Collaborate with suppliers on innovative business models to source renewable energy
Other, please specify (Collaboration on Science Based Targets and the related roadmaps. Also facilitate adoption of a unified climate transition approach with suppliers)

% of suppliers by number
0.2

% total procurement spend (direct and indirect)
26

% of supplier-related Scope 3 emissions as reported in C6.5
1

Rationale for the coverage of your engagement
As part of our 2030 journey we work very closely with our most intense category groups on their reduction roadmaps towards 2030 targets. For instance with our main assembly suppliers, we have set a target that they should reach net zero emissions in their Nokia relevant manufacturing part by 2030. As manufacturing sites are spread across regions, we closely work with sites on the exact roadmaps how to get there and also looking into opportunities of renewable electricity sourcing. Similarly with our logistics suppliers who help us to work on the reduction of our upstream logistics emissions by 2030 by 72% we are working on adoption of multi modal transportation, also incorporation of biofuels such as SAF into logistics offering.

Impact of engagement, including measures of success
We work in strategic partnership with our suppliers towards achieving our 2030 aspiration and helping to commonly address the challenge to limit average rises in temperatures to 1.5 °C. We communicated to all of our suppliers Nokia own Science Based Target commitment and expectations from them. We have supported suppliers on the development of factory level roadmaps for net zero target by 2030 and are following the progress up at business review meetings. We also share our own learning from Nokia organization and help to look at renewable electricity and biofuels uptake related opportunities.

For instance, from 2019 baseline, our final assembly suppliers have already been able to reduce emissions from 74996 tons of CO2e to 45983 tons of CO2e.

Comment

C12.1b

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

Type of engagement & Details of engagement

Education/information sharing	Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

50

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

50

Please explain the rationale for selecting this group of customers and scope of engagement

In 2022 95% of our total GHG footprint was a result of the use of sold products by customers in their communications networks. It's essential that we work with customers on reducing power consumption, increasing energy and material efficiency and innovating across the value chain, while promoting circular practices. Products from Mobile Networks business group account for a large proportion of the carbon emissions caused by products in use, which is why we engage with key Communication Service Providers (CSPs) who are buying these products. Sales to CSPs represented approximately 80% of Nokia sales in 2022. We also engage with non-mobile service providers on environmental and social aspects of technology and digitalization.The selection of customers relates to the most significant customers from both a sales perspective and greatest potential product use time related emissions. Those customers would therefore represent the group where improvements in our products could bring the greatest improvements to energy efficiency and thus potential reduction in GHG emissions during product use time while also supporting our customers business and climate goals. We continue to engage our customers through global campaigns on Zero Emission products, AirScale and new generation energy efficient base stations, the latest energy efficient silicon and software features that reduce energy consumption. We introduce innovations such as Nokia liquid cooling to replace aircooling – a major cause of energy use in radio base station sites. In 2022 we held customer workshops and review meetings on the benefits of 5G and 5G advanced, related energy efficiency features, circular products and services, and materials, packaging and waste. Beyond mobile radio access products we also engage with our customers on other areas of our portfolio, introducing new chipsets, software and service offerings that aim to improve energy efficiency and thus reduce emissions compared to previous versions. We also hold regular update sessions with customers as required on ESG topics, our targets and achievements and explore potential areas of collaboration on environmental and social issues. In 2022 we rolled out dedicated ESG strategy and approach discovery workshops with key customers. We also engage with customers through disclosure platforms such as CDP and EcoVadis.

Impact of engagement, including measures of success

The success of engagement with our customers can be indirectly measured through our Science Based Targets, specifically the category "Use of sold products". We commit to reduce our emissions by 50% across all Scopes (1, 2, and 3) between 2019 and 2030 in our 1.5°C aligned Science Based Targets. The Scope 3 target includes almost 100% of our current product portfolio as well as logistics and EMS manufacturing. Progressing towards and eventually reaching this target of reducing 50% of emissions by 2030 is our measure of success. Also, as we share our progress on climate-related topics with our customers through platforms such as CDP and EcoVadis, when we see the number of customers requesting our data via these platforms increase, we consider that a measure of success. We have regular review meetings with larger key customers and sustainability issues are included in sales proposal responses. Some larger CSPs also have their own specific supplier engagement surveys which we respond to as well as topic specific requirements, such as for materials, recyclability and recycled content. We also share upon request with all customers our approach to sustainable development, materiality and environmental actions as well as our related programs. In 2022 we again saw increased interest towards our energy efficient product portfolios with around 150 customers who have installed energy efficiency software features on our products, including more than 50 customers with 5G energy efficiency features. Over 60% of our radio products in the field now have one or more energy efficiency software features activated. Modernization is a key approach to minimizing the expected rise in energy use as 5G is deployed and data grows, and in 2022 the base station sites we modernized used on average 44% less energy than those that were not modernized. We also share with our customers the potential to reuse, recycle or refurbish legacy equipment as needed.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

We are participating in international standardization work related to the environmental impact of ICT sector in key organizations focusing on telecommunication specific aspects such as the ETSI Technical Committee EE (Environmental Engineering) and ITU-T Study Group 5 (Environment, climate change and circular economy) where we hold official positions (editors, associate rapporteurs, WP vice-chair). Commonly agreed measurement methodology standards are the basis for reporting energy performance of the products as well as GHG emissions in a uniform manner.

We have been participating in ETSI standardization work for more than a decade. Other members involved in ETSI standardization include component and product suppliers, like Intel and Cisco, as well as operators, such as Orange and TIM. It is common goal for all to reduce emissions from telecommunication networks. Nokia is also involved in ITU-T standardization work creating methodologies for calculating the GHG emissions from ICT and assessing the GHG emission reductions enabled by ICT. Other members involved in ITU-T standardization include component and product suppliers, like Cisco, as well as operators, such as Orange.

Efficient material usage in Circular Economy has a positive effect on the climate as emissions can be reduced, e.g., in materials sourcing and production. Nokia is participating in the ITU-T and ETSI Circular Economy standardization work targeting to create standard approach commonly agreed with the industry. In 2022, Nokia contributed on product circularity score standard in ITU-T. In addition, we initiated a new work in ITU-T and ETSI to standardize the environmental impact of circular ICT products.

As standardization is a long-term activity in the ICT sector, expanding over several calendar years, incremental progress into the right direction and towards commonly agreed standards is our measure of success in this area. Nokia has long-term strategy to enable with standards the assessment and reporting of carbon emissions from telecommunication sector and quantify the positive effect that telecommunication has in other sectors for reducing their emissions.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement
Climate-related disclosure through a public platform

Description of this climate related requirement
All of our Preferred and Allowed suppliers need to fill out annually CDP questionnaire and disclose their data to Nokia. Minimum requirement for Preferred suppliers is to obtain performance Score C on CDP. And for allowed suppliers D. The requirement can be higher than minimum based on specific Purchasing Category (we have around 90 of different purchasing categories and strategies). Suppliers that do not meet the Category strategy requirements can be downgraded in their status. Furthermore, if CDP result is lower than C- the supplier would not receive satisfactory score under Supplier Performance Evaluation.

% suppliers by procurement spend that have to comply with this climate-related requirement
80

% suppliers by procurement spend in compliance with this climate-related requirement
80

Mechanisms for monitoring compliance with this climate-related requirement
Supplier scorecard or rating

Response to supplier non-compliance with this climate-related requirement
Retain and engage

Climate-related requirement
Setting a science-based emissions reduction target

Description of this climate related requirement
We have set ambitious targets for our suppliers to cut their emissions by 50% by 2030. That rises to 100% for final assembly suppliers from a 2019 baseline who have the same target as Nokia's own factories. We're also working with transportation suppliers to help us to bring our logistics emissions down by 73% by 2030. Final assembly and logistics reduction targets are integrated to Nokia SBTs. Suppliers are encouraged to reduce their emissions in line with Nokia requirements and in alignment with SBTs. As its a long term target, at this stage the response is rather retain and engage. Our final assembly suppliers have already established 2030 targets for Nokia scope of operations to reach to 0 CO2e by 2030. For the rest of the suppliers we follow the progress via CDP. From 481 suppliers (representing 64% of purchasing spend we had 161 of them setting the reduction targets in line with SBTs and 96 have been approved by SBT.

% suppliers by procurement spend that have to comply with this climate-related requirement
100

% suppliers by procurement spend in compliance with this climate-related requirement
24

Mechanisms for monitoring compliance with this climate-related requirement
Supplier self-assessment
Off-site third-party verification

Response to supplier non-compliance with this climate-related requirement
Retain and engage

Climate-related requirement
Other, please specify (Sustainable Aviation Fuel provision by our logistics service providers based on a set criteria)

Description of this climate related requirement
Nokia is working with transportation suppliers to help us to bring our logistics emissions down by 73% by 2030. One of the strategies for reducing emissions among others is to utilize biofuels for transportation, including Sustainable Aviation Fuel, SAF. Sustainable Aviation Fuel provision by our logistics service provider has to be based on a set of requirements including proof of third-party certification for accounting and allocation sustainable aviation fuel to the customers. As this is a new area and we started to work on SAF in 2021, 15% of our core LSP partners meet this requirement in 2021 and in 2022 36 % (calculated based on airfreight share proportion).

% suppliers by procurement spend that have to comply with this climate-related requirement
36

% suppliers by procurement spend in compliance with this climate-related requirement
36

Mechanisms for monitoring compliance with this climate-related requirement
Certification

Response to supplier non-compliance with this climate-related requirement
Other, please specify (Exclude supplier from tender related to SAF transportation provision)

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

Our SBT is aligned with the goal of limiting global warming to 1.5°C. From SBT's website: "Targets are considered 'science-based' if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C."

Nokia was the first telecoms vendor to commit to Science Based Targets (SBT) in 2017 based on the Paris Agreement and recalibrated its SBT target further in 2021 in line with the 1.5 degree warming limitation.

See page 24 in the latest People and Planet report: https://www.nokia.com/sites/default/files/2023-03/nokia-people-and-planet-2022-sustainability-report.pdf
nokia-people-and-planet-2022-sustainability-report.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

We have an active global network of people with global positions, and the messages are agreed jointly in regular meetings between all relevant colleagues. Processes-wise we have e.g., training and governance which support the consistency. Environmental management, including climate change topics, as well as dealing with government officials are part of Nokia Code of Conduct (CoC) and there is an annual mandatory CoC training called Ethical Business Training for all employees. As part of our certified Environmental management system, based on ISO 14001, we also arrange different environmental trainings and conduct internal audits. Our Environmental management system is globally certified according to ISO 14001 and the external audits done by a third party check consistency with our internal guidelines and ISO 14001 requirements.

Our advocacy is consistent with Nokia's ESG strategy. To ensure alignment and consistency across advocacy activities of the Government Affairs (GA) and ESG teams, we have various mechanisms in place. GA team and ESG team belong to the same organization and report to the Chief Corporate Affairs Officer and work regularly together. The teams have a standing monthly alignment meeting to assess political and regulatory developments around ESG (including climate) and Nokia's advocacy related to them. ESG team is directly involved in advocacy activities such as: representing Nokia in climate group of ERT, engaging with European Green Digital Coalition, DigitalEurope and Climate Leadership Coalition CLC and representing Nokia in Responsible Business Alliance. Specifically related to industry associations, which are developing joint industry views on various policy issues, GA team is centrally coordinating Nokia representation in the associations. This central coordination ensures consistency in messaging even when different experts across Nokia engage in different work streams of industry associations across continents. Issues are discussed also at the management team level, for example in our Sustainability Council including people who are in charge or both implementing and developing strategy and policy activities, to ensure consistency of messages with the strategy. All our policy engagements are consistent with the company's overall sustainability strategy.

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?

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

EU Taxonomy

Category of policy, law, or regulation that may impact the climate

Low-carbon products and services

Focus area of policy, law, or regulation that may impact the climate

Low-carbon innovation and R&D

Policy, law, or regulation geographic coverage

Regional

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

Europe

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

We attempt to promote the value of digital technologies and solutions for sustainable transformation of industry and cities to policy makers.

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

In our view, digital tools and technologies and the critical role they can play in the decarbonisation of other industries and society should be better included in the Taxonomy.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association
Other, please specify (DIGITALEUROPE)

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
DIGITALEUROPE's vision is a Europe where digital technologies, innovation, and artificial intelligence can provide Europe's people with competitive jobs, better health, and better public services. A strong unfragmented DIGITAL EUROPE that takes leadership in creating digital Inclusion, Green growth, Innovation, Trust, Agile mission-based policy making that drives prosperity and creates benefits for the European society and leads globally in an open economy. As part of Green Growth DIGITALEUROPE advocates that Europe should continue to build a framework for a sustainable, low-carbon, and resource-efficient Europe that is fit for the fast-moving innovations in the ICT sector and leverages the true potential of digital technologies as key enablers for green growth. (See https://www.digitaleurope.org/policies/strongerdigitaleurope/) DIGITALEUROPE has a policy group dedicated to Digital Sustainability that deals with chemicals, eco-design, waste and supply chain transparency issues. This policy group also addresses climate change and circular economy policy. DIGITALEUROPE is convinced that digital technologies can make the big transformation for Europe happen, based on United Nations Sustainable Development Goals (SDGs), circular economy and decarbonisation objectives, and DIGITALEUROPE believes that the following key aspects should be considered by the incoming EU institutions. This position is further detailed in the Call to Action for Digitalisation as key for a sustainable Europe https://www.digitaleurope.org/wp/wp-content/uploads/2019/06/Narrative_Sustainability.pdf.

Through our active participation at all levels of the association we drive the vision of the association as well as help shape the individual positions in the Digital Sustainable Policy Group (DSPG). Notably, Nokia holds the position of President of the Executive Board as well as a vice-chair position in the DSPG

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
0

Describe the aim of your organization's funding
<Not Applicable>

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

Trade association
Other, please specify (Nokia is member of several national trade associations in Europe, for example Technology Industries of Finland)

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
Technology Industries of Finland is the lobbying organisation for technology industry companies. They impact national and EU decision making by providing information about the technology industry (see https://teknologiateollisuus.fi/en/technology-industries-finland). They have a presence in numerous international organisations, for example Orgalime, DIGITALEUROPE and CENELEC (see https://teknologiateollisuus.fi/en/about/international-cooperation-bodies).

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
0

Describe the aim of your organization's funding
<Not Applicable>

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

Trade association
European Roundtable of Industrialists (ERT)

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
The Energy Transition and Climate Change Working Group addresses the triggers for a successful transition towards a low carbon economy, and thus contributes to achieving the goals of the Paris Climate Agreement. Please see the full position on climate change here: https://ert.eu/focus-areas/energy-and-climate-change/

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
0

Describe the aim of your organization's funding
<Not Applicable>

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

C12.4

(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

Status
Complete

Attach the document
nokia-people-and-planet-2022-sustainability-report.pdf

Page/Section reference
Subhead ENVIRONMENTAL, pages 22-38. See especially "Climate", pages 22-26. See also Environmental data, pages 104-108.

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

Comment
People & Planet 2022 report contains information of Nokia's climate targets achievements and working methods.

Publication
In mainstream reports

Status
Complete

Attach the document
nokia-form-20-f-2022.pdf

Page/Section reference
Sustainability and corporate responsibility, pages 90-108.

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

Comment
Nokia Annual Report on Form 20-F 2022 contains information of Nokia's financial data but also about sustainability governance, strategy and targets, including for example combating climate change and responsible sourcing.

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Global Reporting Initiative (GRI) Community Member RE100 Science Based Targets Network (SBTN) UN Global Compact	Nokia is a member of RE100 with the commitment to use 100% renewable electricity. Science Based Targets Network (SBTN): Nokia has approved SBT targets since 2017. UN Global Compact, Nokia is a member for 20 years, currently working with TCFN project together with Finnish Global Compact. Global Reporting Initiative (GRI) Community Member. Additionally, Nokia participates to various environmental groups as part of Digital Europe and Finnish technology industries.

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	Under our Corporate Governance Guidelines, the Board of Directors evaluates Nokia's environmental and social activities and governance practices (ESG), related risks and target setting as well as their implementation and effectiveness in the Company. In line with our mode of operation, the Global Leadership Team (GLT) approves sustainability and climate-related strategy, targets and operational frameworks, within which corporate functions and business groups can operate. Biodiversity-related topics are included in the scope of ESG topics. As part of our implementation of a materiality assessment in 2022, biodiversity also moved into the top quartile of the matrix for the first time, demonstrating growing stakeholder interest in the topic. We also accomplished tangible nature-related actions during 2022. A close examination of our own property portfolio reflects Nokia's long history of responsible environmental stewardship. Today Nokia owns four separate nature protection sites in Finland. Two initially protected areas in the Baltic Sea were established in 1985 and cover 119 hectares of sea and islands in the bay of Båtvik just 25km west of Helsinki city center. A third area was protected in Kuusamo in northern Finland in 2009. It provides a biodiverse-rich 32 hectares of pristine fen area with rich chalky soil. Harjasuo-Laurinkorpi is famous for its endemic and many rare species including two that are on the IUCN Red List of Threatened Species: Hamatocaulis vernicosus and Saxifraga hirculus. Area also protects 11 habitat types of the Habitats Directive. The fourth area is newly protected as of late 2022. This is a natural island called Rikkisaari in Lake Ala-Kitka in Kuusamo. The lake is in fact the largest natural spring in the whole of Europe and provides drinking water to the local communities. The island is 5.6 hectares and is protected under the Finnish Government's nature gift program through which the government protects a corresponding 5.6 hectares of government land. The total Nokia-owned protected land covers 156.6 hectares. In late 2022, we confirmed an exciting partnership with the John Nurminen Foundation to protect biodiversity in the Baltic Sea. A three-year joint effort is meant to combat eutrophication in the Baltic Sea and the associated risk to biodiversity.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Please select	SDG

C15.3

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

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment
No, but we plan to within the next two years

Value chain stage(s) covered
<Not Applicable>

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
<Not Applicable>

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment
No, but we plan to within the next two years

Value chain stage(s) covered
<Not Applicable>

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
<Not Applicable>

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?
Yes

C15.4a

(C15.4a) Provide details of your organization's activities in the reporting year located in or near to biodiversity -sensitive areas.

Classification of biodiversity -sensitive area
Natura 2000 network of protected areas

Country/area
Finland

Name of the biodiversity-sensitive area
Harjasuo-Laurinkorpi https://eunis.eea.europa.eu/sites/FI1101622

Proximity
Up to 5 km

Briefly describe your organization's activities in the reporting year located in or near to the selected area
We have nature protection area in Habitat directive site: Harjasuo - Laurinkorpi. Nokia is land owner in this area but there are no business activities. Protection decision has been made 2009. Area protects 2 species of the Nature Directives and 11 habitat types of the Habitats Directive.

Indicate whether any of your organization's activities located in or near to the selected area could negatively affect biodiversity
No

Mitigation measures implemented within the selected area
<Not Applicable>

Explain how your organization's activities located in or near to the selected area could negatively affect biodiversity, how this was assessed, and describe any mitigation measures implemented

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Education & awareness

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	Please select

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Other, please specify (This paper describes Nokia's position in biodiversity and geodiversity)	Nokia – Biodiversity / Geodiversity Position Paper. Whole document is dedicated to describing Nokia's position in biodiversity and geodiversity. biodiversity-and-geodiversity-position-paper-public.pdf

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 Financial Officer	Chief Financial Officer (CFO)

SC. Supply chain module

SC0.0