

# Welcome to your CDP Climate Change Questionnaire 2023

## C0. Introduction

### C0.1

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

TUBACEX is a premium stainless-steel manufacturer of tubular solutions for the energy sector. Founded in 1963, it is the world's largest producer of seamless tubes in stainless steel and high nickel alloys. Based in Spain, it is one of the few companies with a fully integrated production model, with total control of every step from steel casting to the manufacture of tubes and pipes and their subsequent distribution and sale.

TUBACEX counts with 20 manufacturing facilities in Spain, Austria, the USA, Italy, India, Thailand, Saudi Arabia, Norway, Canada, Singapore, UAE, Guiana and Kazakhstan together with a global distribution network (TSS) as well as sales offices located around the world in 38 countries.

The main sectors of demand for the tubes manufactured by TUBACEX are the oil and gas, petrochemical, chemical and energy industries. It also directs part of its production to the mechanical, aerospace, food, water desalination, electronics, capital goods and new technologies industries, among other sectors of activity.

In 2015 TUBACEX created Tubacex Service Solutions, with service centres in the main business hubs to boost its distribution channel. In 2020 the company added new warehouses in Pennsylvania, USA (TSS PA) and Norway (TSS Norway), in addition to the logistics centres of Amega West, company acquired by the NTS Group in 2020.

One group, leading companies:

- TUBACEX TUBOS INOXIDABLES. TTI– S.A.U. is a subsidiary of TUBACEX S.A., which manufactures exclusively seamless stainless steel and nickel alloy tubes and pipes.
- ACERALAVA (Acería de Álava S.A.U.), part of the Tubacex Group, is a Stainless-Steel Mill that manufactures high quality stainless steels [Martensitic, Austenitic, Superaustenitic, Duplex and Superduplex and high nickel Alloys]. The company supplies premium billets for Tubacex Seamless Tube&Pipe manufacturing mills and is also a key player in the Market supplying premium Ingots, Billets and Round bars to key sectors such as Oil & Gas, Power Generation and Chemical.
- SALEM TUBE Inc. is a subsidiary with industrial facilities in Greenville (Pennsylvania), which manufactures cold-drawn seamless tubes in stainless steel and high-nickel alloys and superalloys.

- SCHOELLER BLECKMANN GmbH (SBER), with industrial facilities in Ternitz (Austria), is a company created in 1840 and joined the TUBACEX Group in 1999. This plant manufactures hot-finished and cold-rolled tubes and has a production plant for umbilical tubes.
- IBF. IBF S.p.A. located in north of Italy is a leading manufacturer of high alloy stainless steel tubes and special fittings of large dimensions.
- TUBACEX INDIA. Located in Umbergaon (India) manufactures cold finished tubes and pipes. The company is able to deliver tubes up to 28 m (length), straight and U-Shape.
- AWAJI STAINLESS. Tubacex Awaji Thailand (Awaji Stainless) started its activity in 1987. In January 2017, it became part of TUBACEX. The manufacturing plant is located in SAMUT PRAKAN, south of Bangkok. Awaji Stainless is specialized in the manufacture of stainless-steel accessories, complementing the range offered by IBF and TTA.
- TUBACEX SERVICE SOLUTIONS. TSS SAU is a trading company within the Group that operates as a “master distributor” of seamless stainless-steel tubes for the domestic and international market. It has the largest stock of stainless-steel tubes in the Spanish market and one of the largest in Europe.
- TUBACEX TAYLOR ACCESORIOS S.A.U. (TTA), Head Office and manufacturing plant located in Artziniega (Alava) Spain, manufactures Seamless butt-welding fittings. This mill complements the activity of the Group in the Oil and Gas field and could provide for a full range of fittings within a unique package by adding products of the rest of fitting manufacturers of the Group (Caps, Tees, etc.).
- TUBOS MECÁNICOS is based on Barcelona and sells mainly mechanical tubes (hollow bars) in carbon steel for use in the manufacture of machined parts.
- TUBACEX SERVICES devoted to service and customized solutions applied to steel products. TUBACEX SERVICES provide complete project management improving organizational efficiency by working collaboratively with key industry stakeholders, cultivating win-win relationships.
- TUBACOAT S.L., is a subsidiary company of the Tubacex Group devoted to engineering and industrial development of customized innovative coatings applied to long steel and nickel alloy products providing longer life cycle to the refining petrochemical processing units.
- TUBACEX UPSTREAM TECHNOLOGIES is a service company created in 2016 specialized in manufacturing, repair and maintenance of stainless-steel machined components for the Oil & Gas industry.
- NTS Group with plants in Norway (Promet), Saudi Arabia (NTS Saudi) and Dubai (NTS Middle East) is a company specialized in manufacturing, repair and maintenance of stainless steel machined components for the Oil&Gas industry.

## C0.2

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

### Reporting year

#### Start date

January 1, 2022

#### End date

December 31, 2022

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

Yes

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

3 years

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

3 years

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

3 years

## **C0.3**

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

Austria  
Brazil  
Canada  
Guyana  
India  
Italy  
Kazakhstan  
Norway  
Saudi Arabia  
Singapore  
Spain  
Thailand  
United Arab Emirates  
United States of America

## **C0.4**

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

EUR

## **C0.5**

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

Operational control

## C-ST0.7

**(C-ST0.7) Which parts of the steel value chain does your organization operate in?**

- Electric arc furnace operations
- Hot rolling
- Cold rolling and finishing
- Scrap steel recycling
- Other steelmaking operations (please specify)
- Machining

## 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	ES0132945017

## 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
President	Both assessing and managing climate-related risks and opportunities. Reviews monthly with CEO ESG topics including climate change.
Chief Executive Officer (CEO)	CEO is informed and on a monthly basis about the climate impact and reports to the board of directors every month.
Other, please specify President of the Sustainability and Good Governance commission	The Chair of this commission meets quarterly with the Sustainability Director and then reports to the rest of the Council members (President included).
Board-level committee	With the aim of reinforcing the TUBACEX Governance structure, and in line with the existing recommendations and good practices in the field, the

	<p>TUBACEX Board of Directors agreed, at its meeting on July 22 2021, to set up a new Sustainability and Good Governance commission. The functions of said Committee are included in the "Regulations of the Sustainability and Good Governance Committee" approved by the Board of Directors at its meeting on December 16, 2021. In this regard, the following basic functions are identified:</p> <ol style="list-style-type: none"> <li>1. Promote the Company's ESG policies so that they are aimed at creating value through sustainable behavior.</li> <li>2. Guarantee that the Group's Strategic Plan integrates and develops ESG policies.</li> <li>3. Know, supervise and evaluate the relationship processes with the different interest groups.</li> <li>4. Guarantee that ESG risks are properly integrated into the Group's risk management and control models.</li> <li>5. Determine the guidelines, criteria and general principles that must govern the content of the Non-Financial Information Statement, as well as any other equivalent reporting system.</li> <li>6. Collaborate with the TUBACEX Foundation in identifying the elements of the Group's Strategy that can be promoted from it through specific ESG projects, so that it becomes an instrument of the sustainability policy.</li> <li>7. Promote compliance by the Group with the 17 Sustainable Development Goals approved by the United Nations ("SDG").</li> </ol> <p>On the meeting of the 16th of September of 2021, the Board of Directors approved the Regulations of the Committee of Audit and Compliance (to date the functions of this Committee were included in the Regulations of the TUBACEX Board of Directors). Among its functions, it assumes the function of supervising the preparation and presentation process, not only of financial information, but also of non-financial information, as well as the supervision of non-financial risks.</p>
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## 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	Please explain
Scheduled – all meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Reviewing and guiding strategy	The board of directors is informed in a monthly meeting. CEO informs of all topics regarding strategy and management including sustainability. The monthly report presented to the board includes the following variables: <ul style="list-style-type: none"> <li>• Supply chain operations, including raw material origin and climate impact</li> </ul>

	Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan	<ul style="list-style-type: none"> <li>• Production operations consumption of key resources (energy, water, materials) and scope 1+2+3 emissions</li> <li>• Internal and external logistics and scope 3 emissions</li> <li>• Circular economy indicators related to renewable material consumptions and</li> </ul> This information is showed as an evolution of the past 12 months and compared to the objective defined for the year. The Sustainability and Good Governance Commission meets 4 times a year and reviews the ESG strategy deployment.
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## 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
Row 1	Yes	In general board members are selected based on a set of key criteria: 1) Professional experience and skills relevant to the strategy or operations of the company, 2) Diversity: Diversity in age, educational background, expertise, gender, and place of origin 3) Reputation as professionals in the market and with stakeholders of the group 4) Strategic view of the evolution of markets, regulation and key macro drivers of change 5) Extensive knowledge of risk strategy, governance and management processes. For the climate related topics additionally, expertise on the energy transition and its implications, the role of public policies in steering social and economic changes, and the new regulatory and disclosure requirements is considered essential.

## C1.2

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

**Position or committee**

President

**Climate-related responsibilities of this position**

Assessing climate-related risks and opportunities

Managing climate-related risks and opportunities

**Coverage of responsibilities**

**Reporting line**

CEO reporting line

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

More frequently than quarterly

**Please explain**

In addition to this, TUBACEX is empowering the Sustainability and Good Governance Commission approved in 2021. Their main objective is to ensure their execution and to monitor the evolution of GHG emissions, SBT performance, Climate Risks, Decarbonization initiatives, etc.

**C1.3**

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

	<b>Provide incentives for the management of climate-related issues</b>	<b>Comment</b>
Row 1	Yes	We apply a PDCA management model, in which we defined at the start of the year key performance indicator for every management area, including specific ones related to sustainability indicators (like energy intensity, emissions, water usage, biodiversity or waste generation/disposal). This area indicators are directly linked with the performance evaluation of the managers, from the operational level to the C-suite level, following a top-down approach for objective definition and bottom-up for performance measurement. More than 200 key persons in the organization are included in the performance measurement model.

**C1.3a**

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

**Entitled to incentive**

Chief Executive Officer (CEO)

**Type of incentive**

Monetary reward

**Incentive(s)**

Bonus - % of salary

**Performance indicator(s)**

Achievement of climate transition plan KPI  
Achievement of a climate-related target  
Reduction in absolute emissions  
Reduction in emissions intensity  
Energy efficiency improvement  
Reduction in total energy consumption

**Incentive plan(s) this incentive is linked to**

Both Short-Term and Long-Term Incentive Plan

**Further details of incentive(s)**

The committee is evaluated on sustainability criteria in the monthly PDCA.  
Each of the selected committee members has an evaluation KPI in their PDCA which depends directly on sustainability performance. This factor is measured as different KPI and compared to the annual fixed objective.  
Meeting these objectives has a direct impact on their annual bonus.

**Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan**

Incentives can play a crucial role in driving the adoption of sustainable practices and technologies. It should be noted that, with the new variable remuneration policy, climate targets (the reduction of the TUBACEX emissions intensity and carbon footprint among its objectives) are included along with other financial objectives.

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**Entitled to incentive**

Chief Sustainability Officer (CSO)

**Type of incentive**

Monetary reward

**Incentive(s)**

Bonus - % of salary

**Performance indicator(s)**

Achievement of climate transition plan KPI  
Achievement of a climate-related target  
Reduction in absolute emissions  
Reduction in emissions intensity  
Energy efficiency improvement  
Reduction in total energy consumption

**Incentive plan(s) this incentive is linked to**

Both Short-Term and Long-Term Incentive Plan



### **Further details of incentive(s)**

The committee is evaluated on sustainability criteria in the monthly PDCA.  
Each of the selected committee members has an evaluation KPI in their PDCA which depends directly on sustainability performance. This factor is measured as different KPI and compared to the annual fixed objective.  
Meeting these objectives has a direct impact on their annual bonus.

### **Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan**

Incentives can play a crucial role in driving the adoption of sustainable practices and technologies. It should be noted that, with the new variable remuneration policy, climate targets (the reduction of the TUBACEX emissions intensity and carbon footprint among its objectives) are included along with other financial objectives.

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### **Entitled to incentive**

Chief Operating Officer (COO)

### **Type of incentive**

### **Incentive(s)**

### **Performance indicator(s)**

Achievement of climate transition plan KPI  
Achievement of a climate-related target  
Reduction in absolute emissions  
Reduction in emissions intensity  
Energy efficiency improvement  
Reduction in total energy consumption

### **Incentive plan(s) this incentive is linked to**

### **Further details of incentive(s)**

The committee is evaluated on sustainability criteria in the monthly PDCA.  
Each of the selected committee members has an evaluation KPI in their PDCA which depends directly on sustainability performance. This factor is measured as different KPI and compared to the annual fixed objective.  
Meeting these objectives has a direct impact on their annual bonus.

### **Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan**

Incentives can play a crucial role in driving the adoption of sustainable practices and technologies. It should be noted that, with the new variable remuneration policy, climate targets (the reduction of the TUBACEX emissions intensity and carbon footprint among its objectives) are included along with other financial objectives.

## C2. Risks and opportunities

### C2.1

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

Yes

#### C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	3	Our short-term vision corresponds to our commitments, by 2023, to reduce 30% our emissions (scopes 1, 2 & 3) from the base year 2019, improving our circularity approach to reduce non recycled raw material consumption, deploy a global energy management system resulting in reductions of at least 5% in energy intensity and source more than 50% of our electricity from renewable sources.
Medium-term	3	10	According to climate targets 2030 to reduce 59% our emissions (scopes 1, 2) and 40% scope 3 from the base year 2019, improving our circularity approach to reduce non recycled raw material consumption and increase to 100% sourcing of electricity from renewable sources.
Long-term	10	30	According to far future climate change impact and recognition of the far below 1.5°-scenario in 2050.

#### C2.1b

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

Our process includes:

- 1) Ongoing identification of significant risks and threats, taking into account their possible impact on business goals and financial statements (including contingent liabilities and other off balance sheet risks).
- 2) Evaluation of the impact, probability and level of control establishing a corporate risks map that is reviewed regularly so that the Company and the companies that form part of the Tubacex Group are able to take actions that mitigate, transfer, share and/or prevent the risks and foster the attainment of opportunities.
- 3) Analysis of risks associated with new investments as an essential element in decision-making on profitability-risk.
- 4) Monitoring and regular control of the risks of the profit and loss account in order to control the volatility of the annual profits of the Group.

5) Maintenance of a system for internal monitoring of compliance with policies, guidelines, and limits, by means of appropriate procedures and systems, including the contingency plans needed to mitigate the impact of the materialization of risks.

A substantive risk is defined by the likelihood and the impact and depends on the level of assessment. Substantive means a likelihood of possible or likely and a medium or higher impact (3 or more in scale of 5, equivalent to more than 3% in EBIDTA).

## 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

Annually

#### Time horizon(s) covered

Short-term  
Medium-term  
Long-term

#### Description of process

Assessment strategies include changes to our own operations, regulations, supply chain, etc. Where appropriate, opportunities for growth are identified and translated into new products. The climate-related risk and opportunities identification, evaluation and control process is integrated in our company risk control and management policy.

The General Risk Control and Management Policy and the basic principles underpinning it are implemented by means of a comprehensive risk control and management system, supported by the proper definition and assignment of functions and responsibilities at the operating level and on procedures, methodologies, support tools and information systems appropriate for the different stages and activities of the system and that include:

- 1) Ongoing identification of significant risks and threats, taking into account their possible impact on business goals and financial statements (including contingent liabilities and other off balance sheet risks). This identification covers the short-, medium- and long-term horizons as defined in the organization.
- 2) Evaluation of the impact, probability and level of control establishing a corporate risks map that is reviewed regularly so that the Company and the companies that form part of the TUBACEX Group are able to take actions that mitigate, transfer, share and/or

prevent the risks and foster the attainment of opportunities.

- 3) Analysis of risks associated with new investments as an essential element in decision-making on profitability-risk.
- 4) Monitoring and regular control of the risks of the profit and loss account in order to control the volatility of the annual profits of the Group.
- 5) Maintenance of a system for internal monitoring of compliance with policies, guidelines, and limits, by means of appropriate procedures and systems, including the contingency plans needed to mitigate the impact of the materialization of risks.

The systems are applied through an organisation structured into the following three levels of protection and defense to face and manage significant risks:

- 1)The Audit and Compliance Committee regularly reviews the internal risk control and management systems, including the fiscal systems, to properly identify, analyse and report the main risks.
- 2)The Sustainability and Good Governance Committee regularly reviews the risks and opportunities related to ESG aspects, including physical risks and transition (regulatory, market, technical, reputational)
- 3)The Internal Audit Department informs, advises and reports to the Committee on the risks associated with the balance sheet and the functional activity areas with the existing identification, measurement and control thereof.
- 4)The Management Committee is responsible for undertaking the integrated risk control and management in the business and decision-making processes.

The Board of directors is directly involved in the process through:

- 1)The Audit and Compliance Committee ensures that the risk control and management policies identify the risk levels that the Company and the TUBACEX Group consider acceptable in accordance with the Corporate Governance Standards.
- 2)The Sustainability and Good Governance Committee regularly reviews the risks and opportunities related to ESG aspects, including physical risks and transition (regulatory, market, technical, reputational)
- 3) The Board of Directors approves the specific policies from which the risk levels that the Corporation considers acceptable are derived (risk tolerance criteria) and are aimed at maximizing and protecting the economic value of the Group within a controlled variability.
- 4) Regular reporting by the CEO on sustainability performance, objectives, and update of substantive risks/opportunities.

The climate-related risk assessment covers:

- i) Direct operations at all of the group sites, including detail KPIs and objectives related to emissions, included in the site PDCA management model and linked to management performance evaluations.
- ii) Upstream with key suppliers in our value chain, identifying and deploying activities to reduce our scope 3 emissions.
- iii) Downstream within companies in the group and with key customers in relation with material recycling, product use and end of life product disposal.

Identification and evaluation of risks/opportunities is update formally at least annually, but monitoring and control is an ongoing process. The Sustainability Director reports monthly to the management committee any changes to substantive risks/opportunities and the CEO to the Board of directors quarterly.

## 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	<p>Risks related to current regulations are included in our risk management process and are evaluated on an ongoing basis by each business unit and operating site.</p> <p>Such risks often translate into loss of revenue through increase in marginal production costs, fines, and increased capex investment to meet new requirements.</p> <p>Our most substantial climate-related policy risk is the EU ETS, which applies increasing pricing of GHG emissions to our steel making site. The risk concerns our steelmaking plant which is exposed to this regulation and yet unprotected against competition from imported steel. We have evaluated this risk against a carbon price ramp up according to IEA's scenarios (APS, STEPS, SDS, NZE).</p> <p>The Sustainability Director is responsible for assessing and monitoring this risk, updating the management committee, including the CEO, and the Sustainability and Good Governance commission of the board.</p> <p>TUBACEX is currently also including CBAM as a new climate transition risk, which will begin to affect the company in the short-medium term.</p>
Emerging regulation	Relevant, always included	<p>Emerging regulations, in particular those linked to greenhouse gases may impact our activities in the future and are therefore always included in our risk assessment process.</p> <p>Future measures in a long-term perspective could result in increased costs for us to operate and maintain our production facilities, install new emissions controls and manage our GHG emissions program.</p> <p>We have evaluated this risk assuming CO2 costs included in the APS, STEPS, SDS and NZE IEA's scenarios, and considering potential new regulation that could tax all the group sites. We have also included in our scenarios, potential taxation of scope 3 emissions.</p> <p>Increase regulation and taxation of non-recycled waste has been identified as another risk, but in this area Tubacex has in place a number of initiatives to reduce landfilled waste by more than 85% by 2030</p> <p>The Sustainability Director is responsible for assessing and monitoring</p>

		<p>this risk, updating the management committee, including the CEO, and the Sustainability and Good Governance commission of the board</p>
Technology	Relevant, always included	<p>We rather consider changes associated with technological improvements or innovations that support the transition to a lower-carbon, energy-efficient economic system as opportunities.</p> <p>New energy technologies, like H2, in production, storage and distribution will require precision tubing, with high requirements on performance and safety, well aligned with our technologies.</p> <p>Within the fossil-fuel energy generation, the transition will create a demand for new technologies, like the Ultra-critical boilers, that increase efficiency and reduce emission intensity, that rely on high performance materials, at the core of the group competence.</p> <p>Industry 4.0 and digitalisation of industrial operations, including energy management, will enable further improvements in our production processes, resulting in improved yields, and increased use of a circular economy.</p>
Legal	Relevant, always included	<p>Legal risks are included in our risk management process and are evaluated on an ongoing basis.</p> <p>Tubacex's operations are subject to a broad range of laws and regulations relating to air emissions, surface and groundwater protection, wastewater storage, treatment and discharges, the use and handling of hazardous or toxic materials, waste management, treatment and disposal practices, the remediation of environmental contamination, the protection of soil, biodiversity and ecosystems or rehabilitation.</p> <p>Regular audits are performed by outside specialists to assess compliance of the production sites' activities with statutory and regulatory requirements. Through the regular and systematic review of regulatory developments, actions implemented in the context of continuous improvement, new investments or organizational changes can be developed or updated.</p>
Market	Relevant, always included	<p>Tubacex provides products and services in several sectors that could be affected by the energy transition to non-fossil fuels like Oil and gas, both upstream and mid/downstream, H2 and biogases, Power Generation, Aerospace, defense or precision components.</p> <p>In some sectors these risks could be positive, like H2 and biogases, where the company is strongly positioned in some of the most relevant projects in the market. One example is the HyValue project (<a href="https://www.hyvalue.com/">https://www.hyvalue.com/</a>) that aims to produce hydrogen, for sale to energy-intensive industrial sectors and transportation, based on a production process that uses urban streams valorization. The updating and combination of cutting-edge gasification technologies for cracking</p>

		<p>and pyrolysis used to produce hydrogen represent the innovative elements of the project. This project will produce high quality hydrogen based on an innovative production process using, amongst other, municipal solid waste.</p> <p>In other sectors, closely related to the fossil fuels, the magnitude of the impact will depend on the speed of the transition toward renewable energy sources.</p> <p>To study the net impact of the transition we have used a scenario approach to project the evolution of the group sales, under other conditions constant, and before considering the impact of the announced diversification strategy of the group. We used IEA STEPS, IEA APS, IEA SDS and IEA NZE as the basis for our analysis.</p>
Reputation	Relevant, always included	<p>Our stakeholders' views on our response to the climate challenge affect the ratings we receive from investors and customers on annual ESG surveys.</p> <p>Increasingly, stakeholders use these ratings as proxy for climate performance which can influence our customers' procurement decisions of tubular solutions and services, and investor's investment decisions.</p> <p>Reputation risks - for example from Tubacex having low scores in investor ratings indices on climate action - could translate into reduced market share from customers in various markets switching to competitors, reduced access to finance and in the worst-case scenario into the loss of our license to operate.</p> <p>In the context of the transition to a low-emissions economy, our social license to operate is defined by several key factors including: our transparency on carbon emissions, our ability to communicate on a complex subject, and our ability to make a credible commitment to meeting the objectives of the Paris Agreement. Climate-related reputation risks are assessed on an ongoing basis through engagement with a wide range of stakeholders, including local and national government, investors, customers, local communities, NGOs, on climate risk issues.</p> <p>Substantive issues are raised to our Sustainability Director, who reports monthly to the management committee and the CEO and quarterly to the Sustainability and Good Governance commission of the board.</p>
Acute physical	Relevant, always included	<p>Risks arising from increased severity of extreme weather events might affect our direct operations by damaging our facilities or harming our people or disrupt the transportation of goods and products along our supply chain. Weather risks are part of our Business Continuity &amp; Risk Management program, leading to preventive investment to secure assets.</p>

		<p>In Tubacex we have analyzed the location of 20 of our locations, representing more than 98% of our activity, to evaluate 18 different variables (temperature, wind, precipitation, etc.) and calculate physical hazard scores for each site, under a number of different scenarios (RCP 4.5, RCP 8.5) and time horizons (short 2020-2039, medium 2040-2059 and long 2060-2099), in relationship with a baseline of observed climate (2000-2019).</p> <p>Specific acute risk indicators include fire weather index acute, extreme wind speed, wet bulb globe temperature acute, max/min daily temperature</p> <p>The resulting information has been used to review risk management process at each site adapting different risk avoiding, mitigation and transfer strategies. This information is also an input to engineering team in the design of new facilities.</p>
Chronic physical	Relevant, always included	<p>Chronic physical risks are driven by longer-term shifts in climate patterns, such as rising sea levels and increasing mean temperatures. While considering these risks it is important to consider the non-linear nature of risks and the cascading nature. Long term changes in climate can manifest as hazards in any of these categories: rainfall patterns, drought, heatwaves, wildfires, storms and cyclones or river and costal flooding. These hazards then can have an impact in pest and diseases, water scarcity, crop failures, limitation to work outside, loss of infrastructure, loss of livelihoods or loss/shifts in ecosystems. All of them can have potential consequences in relation to 1) Migration and displacement of people, armed conflicts or destabilization of markets.</p> <p>In Tubacex we have analyzed the location of 20 of our locations, representing more than 98% of our activity, to evaluate 18 different variables (temperature, wind, precipitation, etc) and calculate physical hazard scores for each site, under a number of different scenarios (RCP 4.5, RCP 8.5) and time horizons (short 2020-2039, medium 2040-2059 and long 2060-2099), in relationship with a baseline of observed climate (2000-2019).</p> <p>Specific chronic physical risk indicators include: Agricultural drought index, hydrological drought index, Wet Bulb Globe temperature chronic, sea level rise, fire weather index chronic, heat wave index, cold wave index</p>

## 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.**

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### Identifier

Risk 1

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

Direct operations

### Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

### Primary potential financial impact

Increased indirect (operating) costs

### Company-specific description

We identify several regulatory risks related to environmental performance and management.

- Scope 1 emissions: One of Tubacex sites (Acería de Alava) is currently exposed to regulatory risks mostly linked to the Directive No. 2003/87/EC of the European Parliament and of the Council of 31 October 2003 establishing the European Community Emissions Trading Scheme. This mechanism is supposed to increase costs due to the obligatory commitments to carbon emissions reductions demanded (EU targets for 2030 and 2050) and due to electricity costs passed by the electric sector to the customers' bills. In the near future other sites in Europe and other geographies could be exposed to similar risks as new public policies will push the decarbonization agenda to cope with the climate crisis
- Scope 2 emissions: Tubacex started in 2020 the change of electrical supply to non-carbon sources, having now 46% of the supply already from non-carbon sources, and plans to have 100% by 2030. However, an increase of CO2 cost under the ETS system, or similar ones in other geographies, would result in an increase of the price paid for electricity, because of the marginal price model used by most markets.
- Scope 3 emissions: Emissions in this scope are currently not included in taxation policies, but it is reasonable to expect a cost transmission from suppliers to Tubacex as new emissions start been considered. The recent change in the ETS system to consider transportation emissions is a move in this direction.
- Waste Management: Scarcity of space for landfill use among other issues is driving a major change in public policies related to waste management. One of the instruments used is landfill taxation, as well as general technical and volume restrictions.

To quantify the financial impact of these risks we used a scenario approach, combining data publicly available and some internal estimations. As the basis for the calculation, we used 4 IEA scenarios, that include CO2 prices

- IEA Announced Policies Scenario
- IEA Stated Policies Scenario
- IEA Sustainable Development Scenario
- IEA Net Zero Scenario

For taxes on waste and/or treatment cost we used internal estimations, described in the description of the financial impact

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The calculated impact of the risk ranges from 7.4M€/y in the Stated Policies Scenario for the short-term period (2021-2030) to 33.9M€/y in the NZE in the medium-term period (2031-2040).

From each scenario we use the CO2 prices for advanced economies/EU as published by the WEO/IEA.

From internal analysis we estimate

- Treatment or landfill cost for each ton of non-hazardous waste (60-70 eur/ton)
- Treatment or landfill cost for each ton of hazardous waste (70-90 eur/ton)
- % if upstream emissions taxed on CO2eq emissions (0% short term, 50% medium-term, 100% long-term)

As a basis for the calculation, we use our emissions and waste generation data from the last representative year (2019, since 2020/21 were seriously influenced by COVID and a

labor conflict in our steel mill) and we project to each period based on our SBT and NZ targets.

### **Cost of response to risk**

#### **Description of response and explanation of cost calculation**

The management method consists of GHG reduction in scopes 1, 2 and 3.

As part of our 2030 commitment to cut emissions in scope 1&2 by 59%, in 2022 we continued sourcing more than 46% of our electricity from renewable sources, aiming to achieve 100% by 2030.

In parallel, we have planned and incorporated a program into the processes that are launched at the end of the year as a requirement to the plants (and some already have it). It is about a global program to optimise energy use and management, aligned with ISO 50001, to reduce globally 10% our energy intensity by 2030. We estimate the cost of this program in 1.2M€.

In relation to scope 3 and waste management, we prioritise the promotion of a circular economy approach, increasing the use of recycled materials, and therefore avoiding emissions related to raw material extraction, production, and delivery upstream. As a result of this initiative the emission intensity (tons of CO<sub>2</sub>e per € of Gross Value Added) in scope 3, was reduced by 9% in 2021 compared to 2019 (base year).

We have set annual targets for each scope deployed at the site level and included them in the PDCA management model.

### **Comment**

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#### **Identifier**

Risk 2

#### **Where in the value chain does the risk driver occur?**

Downstream

#### **Risk type & Primary climate-related risk driver**

Market

Other, please specify

Reduced demand in the fossil fuel industries

#### **Primary potential financial impact**

Decreased revenues due to reduced production capacity

#### **Company-specific description**

Tubacex provides products and services in several sectors that could be affected by the energy transition to non-fossil fuels like Oil and gas, both upstream and mid/downstream, H2 and biogases, Power Generation, Aerospace, defense, or precision components.

In some sectors these risks could be positive, like H2 and biogases, where the company is strongly positioned in some of the most relevant projects in the market. One example is the HyValue project to generate green H2 from urban waste.

In other sectors, closely related to the fossil fuels, the magnitude of the impact will depend on the speed of the transition toward renewable energy sources.

To study the net impact of the transition we have used a scenario approach to project the evolution of the group sales, under other conditions constant, and before considering the impact of the announced diversification strategy of the group.

Market risks have been analyzed in 4 publicly available scenarios:

- IEA Announced Policies Scenario: A scenario which assumes that all climate commitments made by governments around the world, including Nationally Determined Contributions (NDCs) and longer-term net zero targets, will be met in full and on time.
- IEA Stated Policies Scenario: A scenario which reflects current policy settings based on a sector-by-sector assessment of the specific policies that are in place, as well as those that have been announced by governments around the world.
- IEA Sustainable Development Scenario: An integrated scenario specifying a pathway aiming at: ensuring universal access to affordable, reliable, sustainable, and modern energy services by 2030 (SDG 7); substantially reducing air pollution (SDG 3.9); and taking effective action to combat climate change (SDG 13).
- IEA Net Zero Scenario: A scenario which sets out a narrow but achievable pathway for the global energy sector to achieve net zero CO2 emissions by 2050. It doesn't rely on emissions reductions from outside the energy sector to achieve its goals.

For each scenario three horizons are considered: short-term (2021-2030), mid-term (2031-2040) and long-term (2041-2050)

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

## **Potential financial impact figure (currency)**

## **Potential financial impact figure – minimum (currency)**

## **Potential financial impact figure – maximum (currency)**

### **Explanation of financial impact figure**

The calculation of the scenarios is based on the following logic

- Current sales are broken down in representative sectors, considering the average of 2016-2020
- For sectors directly linked with any of the energies included in the scenario (oil, natural gas, coal, nuclear, H2 and biogas) we use the average yearly investment figures provided in the IEA scenario as a proxy for the sales evolution, comparing with the average of the 2016-2020 values.
- For other sectors not detailed in the IEA scenarios we use the projected GDP as a proxy
- Projected sales by sector, scenario and time horizon are aggregated and value compared to basis

In the short term (2021-2030), and without considering the impact of the diversification strategy of the group sales would increase 17% in the SPS scenario, 10% in the APS, 2% in the SDS and -15% for the NZE.

In the medium term (2031-2040), and without considering the impact of the diversification strategy of the group sales would increase 23% in the SPS scenario, 3% in the APS, -10% in the SDS and -20% for the NZE.

In the long term (2031-2040), and without considering the impact of the diversification strategy of the group sales would increase 30% in the SPS scenario, 4% in the APS, -15% in the SDS and -19% for the NZE.

The financial impact reported is considering average sales of 2016-2020, and the maximum project sales impact (NZE scenario en 2031-2040)

## **Cost of response to risk**

### **Description of response and explanation of cost calculation**

The response to this risk, is structured around 3 of the 5 strategic pillars of the company strategy approved by the board and shared with our stake holders.

1- Innovation on new technologies required by the new energy sources, positioning the group as a key partner to enable the energy transition.

- a. Supporting our customers in their decarbonization processes (new materials, improved processes..)
- b. Tailor-made solutions and materials for hydrogen applications
- c. Projects focused on energy storage and transport
- d. CC (Carbon Capture) and CCS (Carbon Capture and Storage) solutions

2- Sustainability strategy to decarbonize our operations, reducing our emissions and increasing circularity

a. Tubacex recognized the importance of reducing the emission footprint and in 2020 joined the Science-Based Targets initiative (SBTi) with the aim of reducing its direct and indirect carbon emissions by 2030 to contribute to limiting global warming to below 1.5°C. With a target of 59% scope 1+2 emission intensity by 2030 and 30% for Scope 3 intensity, both in relation to 2019, Tubacex has one of the most ambitious targets in the sector.

b. Tubacex is also pursuing other initiatives to increase the use of renewable materials in the production, reduction of water and waste intensities and monitoring of our biodiversity impact.

3- Diversification: Identify and pursue new opportunities in energy and mobility not related with fossil fuel energy, either through organic or inorganic growth

These actions are integrated in the general group strategy and cost accounting systems do not allow to report specific costs.

## Comment

### Identifier

Risk 3

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

Direct operations

### Risk type & Primary climate-related risk driver

Acute physical

Other, please specify

Heat waves + Rain +Storms

### Primary potential financial impact

Increased indirect (operating) costs

### Company-specific description

Risks arising from increased severity of extreme weather events might affect our direct operations by damaging our facilities or harming our people or disrupt the transportation of goods and products along our supply chain. Weather risks are part of our Business Continuity & Risk Management program, leading to preventive investment to secure assets.

In Tubacex we have analysed the location of 20 of our locations, representing more than 98% of our activity, to evaluate 18 different variables (temperature, wind, precipitation, etc.) and calculate physical hazard scores for each site, under a number of different scenarios (RCP 4.5, RCP 8.5) and time horizons (short 2020-2039, medium 2040-2059

and long 2060-2099), in relationship with a baseline of observed climate (2000-2019).

Specific acute risk indicators include fire weather index acute, extreme wind speed, wet bulb globe temperature acute, max/min daily temperature

The resulting information has been used to review risk management process at each site adapting different risk avoiding, mitigation and transfer strategies. This information is also an input to engineering team in the design of new facilities.

### **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)**

### **Potential financial impact figure – minimum (currency)**

### **Potential financial impact figure – maximum (currency)**

### **Explanation of financial impact figure**

The figure provided refers to the expected mean production losses due to more severe and frequent weather events over the period 2020-2039 and the increased cost of damage insurance. This represents an annual financial impact between 0.25 and 0.33 m€/year.

To calculate this impact

1. we have analysed the location of 20 of our locations, representing more than 98% of our activity, to evaluate 18 different variables (temperature, wind, precipitation, etc.) and calculate physical hazard scores for each site, under a number of different scenarios (RCP 4.5, RCP 8.5) and time horizons (short 2020-2039, medium 2040-2059 and long 2060-2099), in relationship with a baseline of observed climate (2000-2019).

- Short term (2020-2039):
  - o Heat wave hazard score increased from 0.96 to 1.38 (RCP 4.5) and to 1.71 (RCP.8.5)
  - o Hydrological drought index increases 159% (RCP 4.5) and 198% (RCP 8.5)
  - o Extreme precipitation increases 27% (RCP 4.5) and 30% (RCP 8.5)
  - o Wet Bulb Global Temperature Acute increases 55% (RCP 4.5) and 68% (RCP 8.5)

- Medium term (2040-2059):
  - Heat wave hazard score increased from 0.96 to 2.28 (RCP 4.5) and to 3.40 (RCP.8.5)
  - Hydrological drought index increases 440% (RCP 4.5) and 904% (RCP 8.5)
  - Extreme precipitation increases 65% (RCP 4.5) and 66% (RCP 8.5)
  - Wet Bulb Global Temperature Acute increases 179% (RCP 4.5) and 270% (RCP 8.5)
- Long term (2060-2099):
  - Heat wave hazard score increased from 0.96 to 3.42 (RCP 4.5) and to 7.54 (RCP.8.5)
  - Hydrological drought index increases 622% (RCP 4.5) and 2061% (RCP 8.5)
  - Extreme precipitation increases 417% (RCP 4.5) and 751% (RCP 8.5)
  - Wet Bulb Global Temperature Acute increases 55% (RCP 4.5) and 68% (RCP 8.5)

2. We extrapolated the physical hazard scores and indexes variation between the baseline and the short-term horizon, both in the RCP4.5 and RCP8.5, to an increase of the baseline damage insurance cost for the group, considering the non-linearity of the hazard scores, using expert judgment.

3. To calculate upper and lower bounds of cost increase we used a MonteCarlo using the high/low estimates vs. mean of the physical hazard scores

Method details:

Baseline: is Based on ERA5 reanalysis 1980-2019 for all variables except for sea level rise.

Projections: Based on an ensemble of CMIP5 Global Climate models (GCM). The number of models used varies between 17 and 26, depending on the climate variable and RCP scenario

## Cost of response to risk

### Description of response and explanation of cost calculation

Our risk management processes and policies are the basis to identify, evaluate and manage risks in this category. During 2021 we have evolved greatly these processes moving from a qualitative approach to quantitative approach based on reference models (CMIP5 ) and scenarios (RCP 4.5 and 8.5)

In the new model we have deployed a web tool available to our key management roles, to visualize the impact of climate change in our operations. The tool includes detail projections of 18 climate variables and indexes, for each site, with a granularity of 5x5Km, for different RCPs and time horizon, on a numerical, graphical and map view. This tool serves several purposes.

- 1) It creates awareness about the reality of climate change and its implication across our organization
- 2) Provides insights in the selection and design of new facilities
- 3) It is an input for the elaboration of specific risk management protocols at each facility to design business continuity plan
- 4) All of which contributes to manage our damage insurance costs

Costs considered in the financial impact are related to i) climate model analysis specific



to our sites ii) IT tools used to communicate and educate team

### Comment

Variables used: Mean Daily Temperature, Max Daily Temperature, Min Daily Temperature, Mean Daily Precipitation, Mean Daily Wind Speed @10, Mean Daily Wind Speed @100, Mean Daily GHI, Mean Daily DHI, Fire Weather Index Acute, Fire Weather Index Chronic, Extreme Wind Speed (Vref), Agricultural Drought Index, Hydrological Drought Index, Heat Wave Index, Cold Wave Index, Icing Days Index, Frost Days Index, Extreme Precipitation, Wet Bulb Globe Temperature Acute, Wet Bulb Globe Temperature Chronic, Sea Level Rise

Physical Hazard scores: The physical hazard score estimates how strong is the climate change signal when compared to the internal variability of the climate in the region. The higher the score, the more predominant the role of the global warming signal as compared to the natural climate variability. This score is used to compare the strength of the global warming signal across different metrics and/or sites.

The hazard scores are divided in 5 ranges : usual (<1), unusual (1-2), unfamiliar (2-3), unknown (3-5), and unconceivable (>5). In the usual category, the climate change signal is not emerging out of the natural variability; this is the 'old' climate. The names of the other categories are related to how probable it would have been to observe the mean of that category in the old climate. Assuming that the distribution of the natural variability is gaussian, the probability of observing a value similar to the mean of the unusual category is about 16% or 1 in 6 years, for unfamiliar is about 2.3% or 1 in 44 years, for unknown is 0.1% or 1 in 740 years, and for inconceivable is about 1 in 3.5 million years [Frame et al (2017), Hawkins et al (2019)].

### Identifier

Risk 4

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

Direct operations

### Risk type & Primary climate-related risk driver

Chronic physical

Changing temperature (air, freshwater, marine water)

### Primary potential financial impact

Increased indirect (operating) costs

### Company-specific description

Chronic physical risks are driven by longer-term shifts in climate patterns, such as rising sea levels and increasing mean temperatures. While considering these risks it is important to consider the non-linear nature of risks and the cascading nature. Long term changes in climate can manifest as hazards in any of these categories: rainfall patterns, drought, heatwaves, wildfires, storms and cyclones or river and coastal flooding. These

hazards then can have an impact in pest and diseases, water scarcity, crop failures, limitation to work outside, loss of infrastructure, loss of livelihoods or loss/shifts in ecosystems. All of them can have potential consequences in relation to 1) Migration and displacement of people, 2) armed conflicts or 3) destabilization of markets.

In Tubacex we have analysed the location of 20 of our locations, representing more than 98% of our activity, to evaluate 18 different variables (temperature, wind, precipitation, etc) and calculate physical hazard scores for each site, under several different scenarios (RCP 4.5, RCP 8.5) and time horizons (short 2020-2039, medium 2040-2059 and long 2060-2099), in relationship with a baseline of observed climate (2000-2019).

Specific chronic physical risk indicators include:

- Agricultural drought index
- Hydrological drought index
- Wet Bulb Globe temperature chronic
- Sea level rise
- Fire weather index chronic
- Heat wave index
- Cold wave index

Considering that our activity is mostly in closed facilities with sufficient measures to maintain working compatible temperatures, the impact of increased temperatures and more frequent heat waves is more related to the increased cost of energy to regulate the internal temperature and more importantly with other socio-economical that could affect the communities in our locations

Method details:

Baseline: is Based on ERA5 reanalysis 1980-2019 for all variables except for sea level rise.

Projections: Based on an ensemble of CMIP5 Global Climate models (GCM). The number of models used varies between 17 and 26, depending on the climate variable and RCP scenario

Data sources: ERA5 and baseline sea level rise: Copernicus Data Store; CMIP5: Earth System Grid Federation

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

### **Potential financial impact figure (currency)**

### **Potential financial impact figure – minimum (currency)**

### **Potential financial impact figure – maximum (currency)**

### **Explanation of financial impact figure**

We have calculated the increase in the specific variables related to chronic climate change in our facilities, but at this stage we are still working in developing a model to translate this in financial impacts. Especially considering that the most relevant risks are for the communities where we have the facilities.

In relation to our evaluation, we found the following expected changes:

- short term (2020-2039):
  - Chronic physical hazard scores increased from 0.61 to 2.70 (RCP 4.5) and to 3.30 (RCP.8.5)
  - Withing these hazards, the Wet Bulb Globe Temperature Chronic increased from 1.22 to 3.40 (RCP4.5) and 4.20 (RCP8.5)
  - Increase of 4.47cm sea level (RCP4.5) and 4.97cm (RCP8.5)
- medium term (2040-2059):
  - Chronic physical hazard scores increased from 0.61 to 1.54 (RCP 4.5) and to 2.isabel caballero <isabel.caballero@climatescale.com> (RCP.8.5)
  - Withing these hazards, the Wet Bulb Globe Temperature Chronic increased from 1.22 to 2.96 (RCP4.5) and 4.1 (RCP8.5)
  - Increase of 12.46cm sea level (RCP4.5) and 15.49cm (RCP8.5)
- long term (2060-2099):
  - Chronic physical hazard scores increased from 0.61 to 2.29 (RCP 4.5) and to 4.50 (RCP.8.5)
  - Withing these hazards, the Wet Bulb Globe Temperature Chronic increased from 1.22 to 4.39 (RCP4.5) and 8.84 (RCP8.5)
  - Increase of 31.50cm sea level (RCP4.5) and 47.00cm (RCP8.5)

### **Cost of response to risk**

### **Description of response and explanation of cost calculation**

Our strategy to manage the chronic physical risks is structured in several lines

- 1) Project evolution of key climate for the location of each of the group facilities using reference models (CMIP5, RCP4.5/8.5) for short, mid, and long horizons
- 2) Quantify physical hazard scores for each facility comparing evolution of variables against baseline period
- 3) Communicate and educate management team at each location about the risks, to adapt risk management plans and raise general awareness about climate change

- impact. This includes deployment of IT tools to visualize projections and potential risks
- 4) Use physical hazard scores in our processes to select new locations and design new facilities
- 5) Share our analysis with other stakeholders potentially affected by risks, like local communities, suppliers, or employees

Costs considered in the financial impact are related to i) climate model analysis specific to our sites ii) IT tools used to communicate and educate team

**Comment**

Variables used: Mean Daily Temperature, Max Daily Temperature, Min Daily Temperature, Mean Daily Precipitation, Mean Daily Wind Speed @10, Mean Daily Wind Speed @100, Mean Daily GHI, Mean Daily DHI, Fire Weather Index Acute, Fire Weather Index Chronic, Extreme Wind Speed (Vref), Agricultural Drought Index, Hydrological Drought Index, Heat Wave Index, Cold Wave Index, Icing Days Index, Frost Days Index, Extreme Precipitation, Wet Bulb Globe Temperature Acute, Wet Bulb Globe Temperature Chronic, Sea Level Rise

Physical Hazard scores: The physical hazard score estimates how strong is the climate change signal when compared to the internal variability of the climate in the region. The higher the score, the more predominant the role of the global warming signal as compared to the natural climate variability. This score is used to compare the strength of the global warming signal across different metrics and/or sites.

The hazard scores are divided in 5 ranges : usual (<1), unusual (1-2), unfamiliar (2-3), unknown (3-5), and unconceivable (>5). In the usual category, the climate change signal is not emerging out of the natural variability; this is the 'old' climate. The names of the other categories are related to how probable it would have been to observe the mean of that category in the old climate. Assuming that the distribution of the natural variability is gaussian, the probability of observing a value similar to the mean of the unusual category is about 16% or 1 in 6 years, for unfamiliar is about 2.3% or 1 in 44 years, for unknown is 0.1% or 1 in 740 years, and for inconceivable is about 1 in 3.5 million years [Frame et al (2017), Hawkins et al (2019)].

**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**

Markets

**Primary climate-related opportunity driver**

Other, please specify

New market for existing or improved product lines

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

The increase of renewable energy availability will create the need of energy storage in large quantities, in order to absorb peaks of production, and the imbalances between production and demand. One of the best ways to fulfil that need is to produce green hydrogen where there is excess electricity.

The EU green deal defines the hydrogen value chain as one of the building blocks of the future. This will require a huge amount of investment worldwide.

-Green hydrogen. Due to the physical nature of hydrogen, stainless steels tubes will be across the value chain. Tubacex is well positioned to capitalize this large opportunity, as one of the leaders in the industry of seamless stainless tubulars.

Currently, Tubacex is one of the very few industry leaders producing and supplying precision stainless steel tubing, which is used in several equipment associated to green hydrogen, like electrolysers, liquefaction and liquid storage & transport, transport in gaseous form at 100% concentration, and hydrogen stations. The rising demand of our products is confirmed by specific real projects that are starting to be executed.

Several R&D projects have been launched, to cover future needs of offshore H2 transport, ultra-high pressure H2, and electrolysers.

-Another cheaper way to produce hydrogen is blue hydrogen.

We are currently supplying products for grey hydrogen installations and several trends can impact positively our business.

It is assumed that about 10 kg of CO2 are produced per kg of grey H2. There are several technological trends to mitigate that, like:

- Installing secondary units to produce hydrogen from side streams of the process, which require more corrosion resistance materials

- New designs of steam reformers, like recuperative concepts that increase the energy efficiency. TUBACEX has developed a new product suitable for this application, and the first commercial order has already been delivered. TUBACEX is well positioned and has been developing new products for these applications.

- Biofuels and biomass valorisation: We are seeing a fast-growing number of projects under execution, dedicated to biomass processing, or the production of sustainable

products. Associated to that, we have experienced a growing demand of higher corrosion resistant alloys, shifting the production mix towards higher value products. For example, the product mix of one of our production plants have changed dramatically during the last two years.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The calculated figure is based on an aggregated estimated demand of different product categories in 2030 onwards:

- Precision and high pressure tubing
- Specialities for high corrosion / high temperature
- High nickel alloys
- Ceramic coatings
- Additional new products

The current status of the different product categories is:

- Precision and high-pressure tubing: Nowadays it is produced in different plants of the group, in USA, Austria and India. In 2019-2020, a new production plant has been commissioned in USA, and a ramp-up it is expected within the next 5 years.
- 
- Specialities for high temperature: Most of the R&D of some specific new products is done. Several prototypes have been installed in the field, and the first orders have been already delivered. The products are ramping-up, and continuous growth is expected until 2030
- High nickel alloys: Growing demand from biomass / residues processing.

- Ceramic coatings: A new and worldwide innovative solution has been developed during more than 8 years of R&D. The products have been already industrialized, with an investment into a new plant which is already operating, and several orders have already been delivered. A ramp-up is expected until 2030 and beyond
- Additional new products: There are some products in early stage of development, targeting the H2 economy. The ramp-up can happen after 2025, and it has not been estimated a meaningful revenue stream, although it is an upside over the estimated figures.

### **Cost to realize opportunity**

#### **Strategy to realize opportunity and explanation of cost calculation**

As of today, >60% of the R&D expenditure is dedicated to developments targeting, directly or indirectly, the green economy (hydrogen & renewables), CO2 emissions reduction or circular economy.

We have considered as cost, the sum of the R&D effort, including the cost of promotion of new products, sustained until 2030, assuming no disruptive changes in the strategy of the company.

It has not been considered additional CAPEX, as the current facilities, including very recent investments, are though to be capable to address the future demand.

### **Comment**

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#### **Identifier**

Opp2

#### **Where in the value chain does the opportunity occur?**

Direct operations

#### **Opportunity type**

Energy source

#### **Primary climate-related opportunity driver**

Use of lower-emission sources of energy

#### **Primary potential financial impact**

Reduced direct costs

#### **Company-specific description**

The processes involved in the production of steel bars and seamless stainless tubes are energy intensive requiring temps > 800°C that can not be achieved with electrical process and that currently are based on natural gas. Natural gas represents more than 60% of the energy consumption of the group.

The natural gas is used at reheating furnaces, before forging or hot rolling operations. The melting of steel is 100% electrified.

In order to reduce CO2 emissions, a broad investigation program is being carried out, and the following measures have been identified:

- Energy savings by improving operations
- Substitution of NG by biomethane. No investment required, but there is no availability nowadays. Long term it is expected to reach aprox. 10% of needs.
- Partial electrification. Currently under study. It would require a major revamping of the existing furnaces.
- Blending with green H2. Technically feasible, with significant CAPEX.
- CCU: Carbon Capture is possible, but a conversion into liquids is needed in order to transport or storage out of the factory. Currently under study. Long term.

The use of green H2, produced with electrolyzers on-site, based on a supply of renewable electricity, either produced internally or sourced through PPA looks particularly interesting. In our case, we consume pure O2 in the process of making stainless steel. As it is also produced in the electrolysis process, the need to buy from external sources would be eliminated. This fact is an upside over other potential producers of green H2, which need to vent the O2 to the atmosphere, wasting the energy associated with it.

Tubacex is working, in collaboration with engineering and utility companies to evaluate the potential of this opportunity.

Current values make this alternative not feasible, expected reduction of CAPEX and increase of operational efficiency of the H2 production process in the near-mid future could make this a key element of our decarbonization strategy.

The business case will be much more compelling if part of the green H2 could be sold for mobility applications. On one hand, the economies of scale favours bigger electrolyzers, and on the other hand, the agnostic price for H2 in mobility is 5-6€/kg, while for industrial use as energy is 1.5 €/kg.

We are envisioning a green hydrogen project within a framework of a local “energy community”, involving local authorities and other industries around, in order to make the project economically sustainable.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**



### **Potential financial impact figure – minimum (currency)**

### **Potential financial impact figure – maximum (currency)**

### **Explanation of financial impact figure**

The financial impact now is negative, -1.6M€ per year but we consider it an opportunity. This opportunity is driven by our sustainability objectives and the financial target is to reach at least a break-even result in relationship with the fossil fuel alternative, once included the external costs, through the inclusion of a carbon tax in line with the transition scenarios aligned with the 1.5° ambition approved in Paris 2015.

The main assumptions of the model are

- i) 10% blending rate of H2 with Natural Gas for internal use and injecting the remaining capacity in the network
- ii) Internal use of O2 produced
- iii) average prices for 10-year period of 76 €/Mwh for electricity and 30 €/Mwh for natural gas,
- iv) average CO2 price for 2022-2030 of 100 €/t
- v) O2 price linked to current market prices,
- vi) utilization factor of 73%
- vii) 0% H2 gas network incentive (over natural gas price)
- viii) 5MW power module
- 0% subsidies for the investment

Based on these assumptions an improvement in the OPEX of at least 15-20%, or selling for mobility approx. 30% of the H2 produced, would be needed to reach operational break-even

### **Cost to realize opportunity**

### **Strategy to realize opportunity and explanation of cost calculation**

### **Comment**

Tubacex' opportunity context for the generation of Green H2 is our global initiative to reach our emission reduction targets by 2030, of 59% for Scope 1 and 2 intensity and 30% for scope 3, in our road to net zero in 2050. The main source of scope 1 emissions is the consumption of natural gas used in the production process.

In order to reduce these emissions we have a strategy structure in 4 axes:

- i) improve energy efficiency of the existing processes, implementing ISO50001 aligned methods and tools
- ii) Improve the yield of production process, reducing scrap and reworks and therefore reduce energy intensity per unit of sold products,

- iii) Explore and develop solutions to replace totally or partially natural gas consumption with green electricity processes,
- iv) Replace natural gas with alternative combustion fuels, with lower or none emissions like biogases or H<sub>2</sub>. Our target is to have more than 40% of our energy from non-fossil sources in 2030.

Within our 2022-2026 company strategic plan we have identified 35 strategic projects including several in the 4 axes previously described. A multidisciplinary team, including people from R&D, operations, sustainability, financial and supply chain teams participate in the “H<sub>2</sub> generation” project.

All strategic projects are reviewed monthly by the management committee lead by our CEO and reported quarterly to the board.

Cost calculations of the opportunity are described in the Explanation of financial impact figure

### **Identifier**

Opp3

### **Where in the value chain does the opportunity occur?**

Direct operations

### **Opportunity type**

Resource efficiency

### **Primary climate-related opportunity driver**

Use of recycling

### **Primary potential financial impact**

Reduced direct costs

### **Company-specific description**

High alloy and stainless-steel slags are by-products of the manufacture of these steels by either the electric arc furnace process (EAF) or the argon oxygen decarburisation (AOD) process. These slags contain high-value elements (Cr, Ni, Mo, Ti, V...) as oxides or in metallic form, some of them being environmentally problematic if dumped. Thus, any approach toward circular economy solutions for stainless steel slags would have great economic and environmental impacts.

In the past many solutions have been developed to recycle carbon steel slags, however stainless-steel slags present specially difficulties due to the expansivity of the inert material, once an R4 recovery process has been performed to recover the metallic component, limiting the application of these inert material as construction material.

Tubacex produces more than 20.000tn of black and white slags every year, which until

now had to be disposed in landfills, once processed to recover part of the metallic content. Tubacex identified an opportunity to improve the recovery processes, increasing the metallic recovery, which is then used as input to the steel making process, reducing raw material requirements, while applying innovative processes to remove negative characteristics, like expansivity, of the material.

During 2021 we completed a project, in collaboration with supplier specialized in waste treatment and material recovery, to test a new process to achieve these goals. The tests which involved more than 300tn of material were completed successfully. As a results of this, a new process has been implemented, that will result in 100% recycling of all slags produced by Tubacex, starting in 2022, avoiding more than 20.000tn of landfill, recovering more than 800tn of key materials and avoiding more than 3600tn of CO2eq emissions. In the calculation of the avoided emissions all transport and operation emissions of the recycling process were accounted.

**Time horizon**

Short-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The financial impact considering all involved costs and the benefit from recovered material, in the material price scenarios we used, is negative, -155,000€ but we still consider this an opportunity because of the high environmental return, reducing our scope 3 emissions, reducing our landfilling volumes, and increasing renewable material use.

The financial impact is calculated based on the following assumptions

Baseline cost:

-calculated with Business as Usual (BAU) costs in 2022, including average landfilling costs of 35€/tn

Solution costs

- Average recovered metal market prices in 2022 (18.488\$/mt for Ni, 3616\$/mt for FeCr, 38111\$/mt for FeMo and 411\$/mt for ferrous scrap, with 1.183 \$/€)
  - Full transportation costs between the production site and the recycling plant through a low-carbon route, based mostly on maritime and fluvial transportation and reverse logistics of recovered metals
  - Processing cost at recycling plant as negotiated with supplier
- Total net cost per ton of 43.75€, considering value of recovered materials.

### **Cost to realize opportunity**

#### **Strategy to realize opportunity and explanation of cost calculation**

The response to this opportunity has been already implanted and consist in a long-term agreement (LTA) with the technology partner to process all slags from the Tubacex Group.

The LTA also includes plans to extend this collaboration in several other areas of waste management, like refractory materials.

Tubacex is also exploring together with the supplier the feasibility to install a recycling plant close to our facilities to further improve the emission footprint of the operation and support the recycling needs of other companies in the region and in our supply chain.

#### **Solution costs**

- Average recovered metal market prices in 2022 (18.488\$/mt for Ni, 3616\$/mt for FeCr, 38111\$/mt for FeMo and 411\$/mt for ferrous scrap, with 1.183 \$/€)
- Full transportation costs between the production site and the recycling plant through a low-carbon route, based mostly on maritime and fluvial transportation and reverse logistics of recovered metals
- Processing cost at recycling plant as negotiated with supplier.

### **Comment**

This solution is operational since January 2022. We plan to recycle 100% of our slag production in 2022

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#### **Identifier**

Opp4

#### **Where in the value chain does the opportunity occur?**

Direct operations

#### **Opportunity type**

Resource efficiency

#### **Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

### **Primary potential financial impact**

Reduced direct costs

☞ Reduction in cost of energy supplies (electricity, natural gas) and in CO2 right emissions related to ETS

### **Company-specific description**

Improving processes efficiency has a direct impact both in a reduction of emissions and a reduction of the OPEX of our activities. Energy consumptions (mainly electricity and natural gas) are one the key resources with impact both in emissions and operating cost.

Based on this and on our objective of meeting our climate related goals we launched a corporate energy efficiency project. The project combines 1) the deployment of energy digital measurement and control systems linked to our Manufacturing Execution Systems (MES), 2) changes in our lean shop floor and production management processes with a focus on energy, and 3) specific energy efficiency technological changes (heat recovery, variators, etc).

We started this project with an As-Is analysis in which we identified the improvement potential of our top 2 main energy consuming plants (>140Gwh electricity and 220Gwh Gas). The result of this initial phase were two different action lines in which we have been actively working during the second half of 2021.

Action line 1: Deploy an Energy Management System that enables us having online detailed information of gas and electricity consumption at workstation level. For this, we designed a new metering network that integrated with the already existing meters would give us consumption information of the main energy consuming stations. This Energy Management System helps us associate consumption volumes with different production parameters, such as tonnes produced, temperature, pressure, which all together helps us identify the main consumption levers and therefore energy optimization improvement opportunities.

Action line 2: The energy efficiency consulting company identified, during several visits to our production plants, specific energy efficiency improvement initiatives that are now been launched and which impacts are now being measured via the new energy management system. The outputs of this initiatives that have been deployed have been even more encouraging in terms of capex investment and ROI, than what we initially expected.

### **Time horizon**

Short-term

### **Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)****Potential financial impact figure – minimum (currency)****Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

The financial impact of energy efficiency measures has been estimated to be 2,466,000 Eur/year.

It has been calculated based on the business cases build up by an external consulting company, expert in energy efficiency measures for the pilot sites in the group, that represent 73% of the total energy consumption. This third-party consulting company has carried out several on site audits with the objective of quantifying the savings potential of different measures, both in electricity and gas consumption. The values have been extrapolated to the total group consumption.

The financial impact has been calculated considering

- Expected savings by energy type (electricity/natural gas) to be achieved by the identified improvements by 2030. On average 9.6%
- Amortization costs for the estimated CAPEX required to implement identified measures. Main assumptions include 10-year depreciation, 10% public grants
- Operating savings: Reduction in energy costs and CO2 taxation for the facilities included in the ETS.
- Operating cost: Additional costs in software licenses and external services

**Cost to realize opportunity****Strategy to realize opportunity and explanation of cost calculation**

The opportunity in energy optimization is a critical element of our decarbonization strategy, and at the same time, considering the current supply and price crises, an important element our competitiveness strategy.

To enable the opportunity, we have defined a response structured around x axes:

- Standardize and deploy digital solutions to directly measure energy consumption in each process and equipment in our sites, creating a digital twin of our production processes to identify opportunities and manage performance
- Adapt our shop floor model, called Tubacex Production System TxPS, to include

energy as a key operational factor to be managed daily by our teams

- Implement “house-keeping” and low-capex energy efficiency measures quickly as soon as we identify them
- Develop long term agreements with key suppliers to design, build, operate, and finance CAPEX intensive solutions

The costs included in our financial impact include

- Software and hardware costs to deploy our digital model
- Management and training cost to update our operating model and deploy in all our sites
- CAPEX required to implement technological improvements

As savings we consider

- Direct savings in energy supply (electricity and natural gas)
- Indirect saving in CO2 taxation (sites under ETS system)

**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**

No

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

Our climate transition plan is voted on at AGMs and we also have an additional feedback mechanism in place

**Description of feedback mechanism**

Tubacex transition plan is included in our business strategy that is communicated through different channels to all our stakeholders, including shareholders, financial institutions, employees, suppliers, clients, and society in general. The business strategy, as it is presented to our shareholders in the Annual General Meeting, is available directly online in our web page ([https://www.tubacex.com/wp-content/uploads/2022/06/presentacion\\_Junio\\_2022.pdf](https://www.tubacex.com/wp-content/uploads/2022/06/presentacion_Junio_2022.pdf))

- Shareholders: They review and vote the management report in the AGM

- Board: Reviews the strategy and the sustainability plan in the strategy commission and in the Sustainability and Good governance commission
- Investors and financial institutions: Regular bilateral meetings and roadshows
- Suppliers: Two feedback channels i) yearly supplier days where the strategy is presented, and feedback is gathered ii) regular bilateral meetings with key suppliers
- Clients: i) regular bilateral meetings with key clients, ii) annual satisfaction surveys including topics on sustainability
- Employees: i) Town hall meeting in each business unit ii) Suggestion schemes included in our production operating model (TxPS)
- Governments: Periodic meeting with local and regional governments and public agencies in the regions we operate
- Society: Social media input analysis

**Frequency of feedback collection**

More frequently than annually

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

**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	
Row 1	Yes, qualitative and quantitative

**C3.2a**

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios IEA NZE 2050	Company-wide		TUBACEX has used different climate scenarios to consider a wide range of climate outcomes in order to better understand the range of risks and opportunities that TUBACEX could face over different time horizons. In the analysis of the scenarios, the time evolution and trend of the global steel market in the different scenarios proposed by the World Energy Outlook (WEO) have been taken into consideration. In relation to the transition scenarios considered, IEA scenarios have been analyzed. These scenarios foresee a relatively stable evolution of emissions in the first one, going from about 2.5 to 3



			Gt CO2 for the iron and steel sector, while decarbonization in the NZE scenario is remarkable, being expected to be less than 2 Gt CO2 in 2030.
Transition scenarios IEA STEPS (previously IEA NPS)	Company-wide		TUBACEX has used different climate scenarios to consider a wide range of climate outcomes in order to better understand the range of risks and opportunities that TUBACEX could face over different time horizons. In the analysis of the scenarios, the time evolution and trend of the global steel market in the different scenarios proposed by the World Energy Outlook (WEO) have been taken into consideration. In relation to the transition scenarios considered, IEA scenarios have been analyzed. These scenarios foresee a relatively stable evolution of emissions in the first one, going from about 2.5 to 3 Gt CO2 for the iron and steel sector, while decarbonization in the NZE scenario is remarkable, being expected to be less than 2 Gt CO2 in 2030.
Transition scenarios IEA SDS	Company-wide		TUBACEX has used different climate scenarios to consider a wide range of climate outcomes in order to better understand the range of risks and opportunities that TUBACEX could face over different time horizons. In the analysis of the scenarios, the time evolution and trend of the global steel market in the different scenarios proposed by the World Energy Outlook (WEO) have been taken into consideration. In relation to the transition scenarios considered, IEA scenarios have been analyzed. These scenarios foresee a relatively stable evolution of emissions in the first one, going from about 2.5 to 3 Gt CO2 for the iron and steel sector, while decarbonization in the NZE scenario is remarkable, being expected to be less than 2 Gt CO2 in 2030.
Transition scenarios IEA APS	Company-wide		TUBACEX has used different climate scenarios to consider a wide range of climate outcomes in order to better understand the range of risks and opportunities that TUBACEX could face over different time horizons. In the analysis of the scenarios, the time evolution and trend of the global steel market in the different scenarios proposed by the World Energy Outlook (WEO) have been taken into consideration. In relation to the transition scenarios considered, IEA scenarios have been analyzed. These scenarios foresee a relatively stable evolution of emissions in the first one, going from about 2.5 to 3

			Gt CO2 for the iron and steel sector, while decarbonization in the NZE scenario is remarkable, being expected to be less than 2 Gt CO2 in 2030.
Physical climate scenarios RCP 4.5	Company-wide		The essential climate variables are obtained from GCMs [Taylor 2012] and ERA5 reanalysis [Hersbach 2020]. GCMs data at coarse resolution are biased corrected and downscaled to 25km2 resolution using a quantile mapping approach [Canon 2018]. ERA5 is used as reference data, ensuring a globally consistent dataset for multiple variables simultaneously. This results in daily time series that are bilinearly interpolated to the location of the site, for the following climate variables: max, min, mean temperature, precipitation, relative humidity, global horizontal irradiance
Physical climate scenarios RCP 8.5	Company-wide		The essential climate variables are obtained from GCMs [Taylor 2012] and ERA5 reanalysis [Hersbach 2020]. GCMs data at coarse resolution are biased corrected and downscaled to 25km2 resolution using a quantile mapping approach [Canon 2018]. ERA5 is used as reference data, ensuring a globally consistent dataset for multiple variables simultaneously. This results in daily time series that are bilinearly interpolated to the location of the site, for the following climate variables: max, min, mean temperature, precipitation, relative humidity, global horizontal irradiance

### 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**

1. Impact of the energy transition in our current market segments in terms of reduction of sales in fossil-fuel related (Upstream Oil and gas, mid/downstream oil and gas, coal) and increase in renewable link sectors (H2, biogas...) or other sectors (nuclear, precision components, aerospace, etc.)
2. Impact of existing and new regulation on the taxation of CO2 emission, not limited to scope 1 and 2, but also up/down stream scope 3 emissions
3. Impact of regulation changes related to waste management

- 4. Acute physical risks impacting our facilities and operations
- 5. Chronic physical risks impacting our facilities and operations

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

1. Impact of energy transition in company markets

This is covered in detail in one of the risks reported in chapter 2. The scenario analysis based on 4 IEA's reference scenarios (STEPS,APS,SDS,NZE) quantify potential risks and opportunities in 3 different time horizons. This has been used as a key input to our business strategy that considers diversification as one of the major axes. Risk is assessed between 0 and 108700000€

2. CO2 Taxation

We use the same scenarios to evaluate the impact of increased CO2 taxation in our project emissions, according to our established commitments for 2030 and 2050. We enhance the scenarios with the potential taxation of scope 3 emissions. This is covered in detail as a risk in chapter 2. The result of the scenario analysis has served to re-evaluate internally our pathway and increase our ambition, especially in relation to circularity and its impact in scope 3 emissions. Risk is assessed between 7400000 and 33900000€

3. Waste regulation and taxation

The scenario analysis has been used to elaborate our circularity business plan. One specific example is the slag valorisation project started in 2022, that will avoid more than 20.000tn per year of landfilling, while increasing renewable material content in our products. Risk (including CO2taxation) is assessed between 7400000 and 33900000€

4. Acute and Chronic physical risk

The risk analysis, based on two negative scenarios (RCP4.5 and RCP8.5) has enabled us to quantify the potential risks and hazards in each of our existing facilities and in 2022 it is being translated in specific action plans for each facility as well as new guidelines for the design and construction of new facilities, that we expect will help reduce the financial impact in additional insurance premiums. Risk is assessed between 250000 and 300000

**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	Increasing carbon prices through taxes or other mechanisms may impact both our suppliers' and our own operating costs. Recent legislations, such as the Spanish

		<p>Climate Change and Energy Transition Law (121/000019) demand that companies demonstrate excellence in circular economy. These constraints constitute a potential regulatory risk to our products and services, and a financial risk to our operations. However, they also represent an opportunity to promote the benefits of a 100% renewable product such as stainless steel. To act upon these risks, we defined in 2019 a Sustainability Strategy Roadmap, that includes the supply chain as one of the main priority lines, including actions like:</p> <ul style="list-style-type: none"> <li>i) Development of new valorisation technologies to reduce the volume of waste sent to landfills by 80% by 2025 and 95% by 2030 (starting point is 60% during 2019). To achieve this target Tubacex is partnering with other companies in the sector and world class suppliers to build a slag recycling plant to covert waste into green asphalt.</li> <li>ii) Green electricity sourcing: TUBACEX has initiated the process of analysis and negotiation for the extension of the long-term electricity supply agreement (PPA) for renewable energy sources, currently active in the Spanish plants (TTI and ACERÁLAVA), to the rest of the business units. In addition, there is an agreement for the supply of non-fossil fuel at the American plants.</li> <li>iii) Promote ESG criteria in the selection, evaluation, and continuous development of our suppliers. In 2020 we updated our environmental policy and introduced an evaluation model for suppliers, considering ESG parameters, that has reach in 2021 the application to more than 700 suppliers and in 2022 more than 800 suppliers... The TUBACEX Supplier Quality Manual establishes compliance with international standards in terms of respect for the environment in order to form part of the company's panel of suppliers. Among these, the following stand out: ISO 9001 or alternatively QS-9000, VDA certification, ISO / TS 16949 or EAQF or API Q1 may be accepted; ISO 14001 (especially suppliers included in the ERS list "Environmental Risk Suppliers" must have obtained this certificate or, alternatively, present a plan to obtain ISO 14001 within the following 24 months), in addition to other certifications in terms of occupational risk prevention.</li> </ul>
<p>Supply chain and/or value chain</p>	<p>Yes</p>	<p>Identified risks and opportunities related to market, regulation, technology, or physical climate change, will require changes from our existing partners in the supply chain. As we move forward with our strategy to reduce our internal footprint, we will need our supplier to follow us in this road. Scope 3 emissions, mostly upstream, are the largest in our footprint.</p>

		<p>As a result of this we have focused on</p> <p>i) Engage with our suppliers to promote commitment with the Paris objectives. We have reached more than 800 key suppliers (90% of purchase volume) and requested information on their sustainability policies including climate change.</p> <p>ii) Developed new supply chains, with companies specialized in waste management and circularity to increase the already high percentage of renewable material we use (65.70% in 2022 in our steel making company, and 26.65% in the group, but most of the remaining 73.35% is steel produced with renewable materials). As a result of these new supply chains in 2022 we avoided more than 20.000tn of landfill in relation to previous year, while reduced more than 800tn our raw material procurement, contributing to a reduction of 3000tn of emissions)</p> <p>iii) Develop new supply chains related to energy efficiency and decarbonization of energy. Two relevant projects in this area are 1) the global energy efficiency initiative, with our new supplier CoolPlanet, to implement digital energy management solutions and identify and implement energy saving initiatives, 2) Joint venture with Novargi to produce hydrogen, for sale to energy-intensive industrial sectors and transportation, based on a production process that uses urban streams valorisation, that has received a 4.5M€ grant for the EU under grant agreement No 101038968</p>
<p>Investment in R&amp;D</p>	<p>Yes</p>	<p>Tubacex carries out a high level of R&amp;D activity, consistently between 1% and 2% over sales. The program is reviewed and adjusted together with the company strategy, therefore evolving to adapt to new inputs. It should be noted that by 2030, 80% of TUBACEX's innovation efforts will be focused on developing solutions that reduce its customers' emissions, promote the circular economy or improve its environmental performance</p> <p>There are projects related to new products development, new technologies, performance improvement, and basic research within the R&amp;D program. Much of the budget is dedicated to new products development.</p> <p>The breakdown of the recent and future projects, related to sustainability is:</p> <ul style="list-style-type: none"> <li>- 30% of the budget is dedicated to products targeting the green economy (i.e. products for the hydrogen value chain).</li> </ul>

		<p>- 47% of the budget is associated to CO2 emissions reduction, either targeting better efficiency or gas market development.</p> <p>- 6% of the budget is related to circular economy, mainly dedicated to production processes improvement by waste reduction or valorisation.</p> <p>In addition, Tubacex is participating in and exploring different business initiatives, like a waste to H2 project, which has applied to the European Innovation Fund.</p>
Operations	Yes	<p>As part of our risk assessment process, we identified that increasing carbon prices through taxes or other mechanisms may impact our operating costs and that ambitious reduction targets in both our internal and external emissions are needed to support our reputation with different stakeholders (clients, investors, banks, etc.). To respond to these risks, we defined in 2019 a Sustainability Strategy Roadmap, that includes Operations as one of the main priority lines, including actions like:</p> <ul style="list-style-type: none"> <li>- Improve the scrap recovery, classification, and sourcing to increase the scrap content of our steel making operations, reducing the use of pure metals and ferroalloys, thus significantly reducing our scope 3 emissions</li> <li>- Energy Efficiency Programme: Launched a global initiative, covering all manufacturing, logistics and commercial sites in the group, to optimize our energy consumption, including an Energy Management System, aligned with ISO 50001 requirements.</li> <li>- Investments in several key processes to improve yields of the hold and cold forming of hollows and tubes to reduce raw material consumptions.</li> </ul>

### 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 Direct costs Capital expenditures	<p>We present the implications by type of risk/opportunity identified, as presented in a specific chapter</p> <p>MARKET RISKS AND OPPORTUNITIES</p> <p>- Tubacex provides products and services in several sectors that could</p>

	<p>be affected by the energy transition to non-fossil fuels like Oil and gas, both upstream and mid/downstream, H2 and biogases, Power Generation, Aerospace, defence, or precision components</p> <ul style="list-style-type: none"> <li>- To respond to the risks (oil, gas) and the opportunities (H2, biogas, nuclear) Tubacex has defined a clear transition strategy, publicly available, that focuses on clean energies and solution to reduce the emission footprint of clients, allocating more than 80% of the R&amp;D spend to these new areas of growth.</li> <li>- The group has also announced plans to diversify in new sectors, through either organic or inorganic growth, as well as potential disinvestments.</li> <li>- The group is also in the process of launching a sustainable finance framework in 2022Q3 that will cover bonds and loans, linking them to specific sustainability KPIs to enable the transition activities.</li> <li>- The group has also launched sustainability promissory notes and it is in the process on defining a sustainable financial framework, as well as, analyzing particular financial opportunities in relation with ESG</li> </ul> <p><b>REGULATION RISKS</b></p> <p>Changes related to CO2 taxation, not only in scope 1 and 2, but also in scope 3 as a very likely risk, with significant financial impact (details provided in chapter 2.3). To respond to this risk the group defined a sustainability roadmap in 2019 that included a number of actions, with direct implications in the financial planning including:</p> <ul style="list-style-type: none"> <li>- Long term agreements (PPA) with renewable energy producers to guarantee access to green energy at competitive costs. In 2019 we signed an 80Gwh/year PPA to cover most of the group consumptions in Spain and during 2022 we engaged in negotiations to sign additional 55Gwh in a new PPA.</li> <li>- Deployment of new digital energy management systems aligned with ISO50001 in the largest consumption site in the group (Acería de Alava) in 2021, to be rolled out to 100% of the group in 2022-2023.</li> <li>- Feasibility analysis of H2 production onsite to replace partially the natural gas consumption with green-electricity operate electrolyser, in a consortium with several suppliers/partners.</li> </ul> <p><b>PHYSICAL RISKS:</b></p> <p>We identify chronic and acute risks related to each site of the group as a likely source of financial impact:</p> <ul style="list-style-type: none"> <li>- We have developed a quantitative model based on an ensemble of CMIP5 Global Climate models (GCM), using between 17 and 26 models, depending on the climate variable and RCP scenario (4.5 &amp; 8.5)</li> <li>- This information is part of our risk management processes and will have direct impact in the risk evaluation by our insurers, and therefore in</li> </ul>
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	<p>our premiums.</p> <p><b>DIRECT OPERATIONS-RESOURCE EFFICIENCY</b></p> <p><b>ENERGY efficiency</b></p> <ul style="list-style-type: none"> <li>- As an energy intense industry, identify energy efficiency as a major source of competitiveness, especially now as a result of the Ukraine war impact on energy prices</li> <li>- As already introduced in this chapter we have a corporate energy efficiency project that is already generating significant savings in the business units where it has been deployed.</li> </ul> <p><b>RECYCLING</b></p> <ul style="list-style-type: none"> <li>- Our project to increase the renewable material use in our steel making operations, applying circular economy principles, to valorise scrap and waste generated in our direct and downstream operations, has an important impact in our operational costs.</li> <li>- A secondary financial effect, but very relevant, considering commodity market volatility, is the reduction in material price risks. Ingroup recycled material reduce our exposure to market price fluctuations. This is an essential element of our value proposition to our customers, allowing long term agreements with reduced exposure to market fluctuations.</li> </ul>
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### C3.5

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

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

### C3.5a

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

**Financial Metric**

Revenue/Turnover

**Type of alignment being reported for this financial metric**

Alignment with a sustainable finance taxonomy



**Taxonomy under which information is being reported**

EU Taxonomy for Sustainable Activities

**Objective under which alignment is being reported**

Climate change mitigation

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

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

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

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

**Describe the methodology used to identify spending/revenue that is aligned**

TUBACEX has considered steel manufacturing activities (ACERÁLAVA) as eligible, excluding the process of manufacturing tubes and other tubular products included in the last analysis, hence responding to a more precise interpretation of the Directive.

## C3.5b

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

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**Economic activity**

Manufacture of iron and steel

**Taxonomy under which information is being reported**

EU Taxonomy for Sustainable Activities

**Taxonomy Alignment**

Taxonomy-aligned

**Financial metric(s)**

Turnover

CAPEX

OPEX

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

11.3

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

11.3

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

11.3

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

11.3

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

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

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

25.3

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

25.3

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

25.3

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

25.3

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

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

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

10.7

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

10.7

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

10.7

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

10.7

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

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

**Type(s) of substantial contribution**

- Own performance
- Transitional activity
- Activity enabling mitigation
- Activity enabling adaptation

**Calculation methodology and supporting information**

TUBACEX has considered steel manufacturing activities (ACERÁLAVA) as eligible, excluding the process of manufacturing tubes and other tubular products included in the last analysis, hence responding to a more precise interpretation of the Directive.

**Technical screening criteria met**

No

**Details of technical screening criteria analysis**

**Do no significant harm requirements met**

Yes

**Details of do no significant harm analysis**

**Minimum safeguards compliance requirements met**

Yes

**Details of minimum safeguards compliance analysis**

TUBACEX has considered steel manufacturing activities (ACERÁLAVA) as eligible, excluding the process of manufacturing tubes and other tubular products included in the last analysis, hence responding to a more precise interpretation of the Directive.

## C3.5c

### **(C3.5c) Provide any additional contextual and/or verification/assurance information relevant to your organization's taxonomy alignment.**

Our report on eligibility and alignment of certain TUBACEX activities with the criteria of the EU Taxonomy are included in an annex to the organization's annual sustainability report.

The scope of the alignment assessment focused on the activity related to the manufacture of long stainless steel products developed by the Group's steelworks, ACERÁLAVA (NACE 24.10) and the products originating from this plant and sold through TSS (TUBACEX master distributor). Compliance in this case is due to the consumption of scrap in EAF furnaces, as it exceeds 70% of high-alloy steel production.

This report was recently audited by Ernst & Young (EY) auditors, who issued a favorable certificate to the company.

## C4. Targets and performance

### C4.1

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

Absolute target

Intensity target

### C4.1a

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

---

##### **Target reference number**

Abs 1

##### **Is this a science-based target?**

No, but we are reporting another target that is science-based

##### **Target ambition**

##### **Year target was set**

2020

##### **Target coverage**

Company-wide

##### **Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

**Base year**

2019

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

67,234

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

72,790

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

**Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)**

**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)**

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

**Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)**

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

**Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)**

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

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

140,024

**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)**

**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)**

**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)**

**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)**

**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)**

**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)**

**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)**

**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)**

**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)**

**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 CO<sub>2</sub>e)**

**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 CO<sub>2</sub>e)**

**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 CO<sub>2</sub>e)**

**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 CO<sub>2</sub>e)**

**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 CO<sub>2</sub>e)**

**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 CO<sub>2</sub>e)**

**Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO<sub>2</sub>e)**

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

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

100

**Target year**

2023



**Targeted reduction from base year (%)**

30

**Total emissions in target year covered by target in all selected Scopes (metric tons CO<sub>2</sub>e) [auto-calculated]**

98,016.8

**Scope 1 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

28,157

**Scope 2 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

17,897

**Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**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 CO<sub>2</sub>e)**

**Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)**

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

**Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)**

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

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

46,054

**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]**

223.6997467101

**Target status in reporting year**

Achieved

**Please explain target coverage and identify any exclusions**

This target covers Scope 1 and 2 emissions from all our sites and facilities. That means the GHG emissions generated by the consumption of Natural gas, diesel on mobile sources, Coke, electrodes, ferroalloys and additives in furnaces and electricity. The SBTi has approved our intensity targets, but we also have absolute targets of reducing scope 1 and 2 emissions that has been achieved this year.

### **Plan for achieving target, and progress made to the end of the reporting year**

#### **List the emissions reduction initiatives which contributed most to achieving this target**

The reduction on absolute emissions in the reporting year is due to three main reasons:

- Strikes in the Spanish plants that turned out into inactivity of several months.
- Improvement of the efficiency of its production processes thanks to digitalization and new technologies such as the new Energy Management System and energy optimization investments
- Consumption of 100% of renewable electricity (affects scope 2 emissions) in the main energy consuming factories through a long term PPA agreement.

## **C4.1b**

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

---

#### **Target reference number**

Int 1

#### **Is this a science-based target?**

No, but we are reporting another target that is science-based

#### **Target ambition**

#### **Year target was set**

2020

#### **Target coverage**

Company-wide

#### **Scope(s)**

Scope 1

Scope 2

#### **Scope 2 accounting method**

Market-based

#### **Scope 3 category(ies)**

**Intensity metric**

Other, please specify

Metric tons CO<sub>2</sub>e per EUR (€) value-added

**Base year**

2019

**Intensity figure in base year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)**

0.3357

**Intensity figure in base year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)**

0.3634

**Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)**

**Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)**

**Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)**

0.6991

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

100

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

100

**% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure**

**% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure**

**% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure**

**% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure**

**% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure**

**% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure**

**% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure**

**% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure**

**% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure**

**% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure**

**% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure**

**% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure**

**% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure**

**% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure**

**% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure**

**% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure**

**% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure**

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure**

**% of total base year emissions in all selected Scopes covered by this intensity figure**

100

**Target year**

2030

**Targeted reduction from base year (%)**

60

**Intensity figure in target year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity) [auto-calculated]**

0.27964

**% change anticipated in absolute Scope 1+2 emissions**

-60

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)**

0.3357

**Intensity figure in reporting year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)**

0.3634

**Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**



**Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for total Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

0.6991

**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]**

0

**Target status in reporting year**

New

**Please explain target coverage and identify any exclusions**

In line with the new TUBACEX 2022-25 strategic plan, TUBACEX drives forward its diversification strategy to achieve a more balanced business mix with a focus on gas, power, and energy. To achieve a more balanced business mix with a focus on gas, energy transition towards green energies and an alternative to coal, TUBACEX is defining its transformation into a supplier of sophisticated industrial products and high-value-added services for the energy and mobility sector without losing its hallmarks. In this context, the ton of steel produced is no longer a representative indicator of our activity. That's why we have revised our targets and commitments and set new ones based on the value-added.

As the intensity target of reducing scope 1 and 2 emissions to tons of steel sold is a target approved by the SBTi, we have calculated it and reported it as an additional indicator of the carbon performance of TUBACEX in 2021. The approved target is to reduce scope 1 and 2 carbon intensity by a ton of steel sold by 59% in 2030 from a 2019 base year.

### **Plan for achieving target, and progress made to the end of the reporting year**

As an important milestone during the year, TUBACEX has initiated the process of analysis and negotiation for the extension of the long-term power supply agreement (PPA) for renewable energy sources, which is currently active in the Spanish plants (mainly TTI and ACERÁLAVA). In addition, there is an agreement for the supply of non-fossil fuel supply at the American plants. In this way, the company takes a further step forward in its strategy emissions reduction strategy by reducing its dependence on fossil fuel energy.

### **List the emissions reduction initiatives which contributed most to achieving this target**

---

#### **Target reference number**

Int 2

#### **Is this a science-based target?**

No, but we are reporting another target that is S-based

#### **Target ambition**

#### **Year target was set**

2020

#### **Target coverage**

Company-wide

#### **Scope(s)**

Scope 3

#### **Scope 2 accounting method**

**Scope 3 category(ies)**

Category 1: Purchased goods and services

Category 2: Capital goods

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

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 9: Downstream transportation and distribution

**Intensity metric**

Other, please specify

Metric tons CO<sub>2</sub>e per EUR (€) value-added

**Base year**

2019

**Intensity figure in base year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for total Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)**

1.7573

**Intensity figure in base year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

1.7573

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

**% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure**

**% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure**

**% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure**

**% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure**

**% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure**

**% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure**

**% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure**

**% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure**

**% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure**

**% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure**

**% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure**

**% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure**

**% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure**

**% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure**

**% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure**

**% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure**

**% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure**

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure**

100

**% of total base year emissions in all selected Scopes covered by this intensity figure**

100

**Target year**

2030

**Targeted reduction from base year (%)**

30

**Intensity figure in target year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity) [auto-calculated]**

1.23011

**% change anticipated in absolute Scope 1+2 emissions**

0

**% change anticipated in absolute Scope 3 emissions**

-30

**Intensity figure in reporting year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for total Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)**

1.5022

**Intensity figure in reporting year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

1.5022



**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]**

48.3886264914

**Target status in reporting year**

New

**Please explain target coverage and identify any exclusions**

In line with the new TUBACEX 2022-25 strategic plan, TUBACEX drives forward its diversification strategy to achieve a more balanced business mix with a focus on gas, power and energy. to achieve a more balanced business mix with a focus on gas, energy transition towards green energies and an alternative to coal. TUBACEX is defining its transformation into a supplier of sophisticated industrial products and high value-added services for the energy and mobility sector without losing its hallmarks. In this

context, the ton of steel produced is no longer a representative indicator for our activity. That's why we have revised our targets and commitments and set new ones based on the value added.

As the intensity target of reducing scope 3 emissions to tons of steel sold is a target approved by the SBTi, we have calculated it and reported it as an additional indicator of the carbon performance of TUBACEX. The approved target is to reduce scope 3 carbon intensity by a ton of steel sold by 30% in 2030 from a 2019 base year.

Last data are no longer representative of the activity of TUBACEX because of the activity diversification that the Group is conducting and the decrease in 2021 production because of the global crisis created by COVID-19 and the strikes that the Spanish plants experienced during 2021. The strikes forced ACVA to buy more steel from third parties' suppliers, not accounted for as sustainable suppliers with renewable products. This increases scope 3 emissions of 2022, together with a decrease in the steel production, makes this indicator no representative.

**Plan for achieving target, and progress made to the end of the reporting year**

It is worth highlighting the start-up of a solution for the valorisation of 100% of the slag from the steelworks, which will of slag from the steelworks.

**List the emissions reduction initiatives which contributed most to achieving this target**

## 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

Net-zero target(s)

Other climate-related target(s)

## C4.2a

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

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**Target reference number**

Low 1

**Year target was set**

2021

**Target coverage**

Company-wide

**Target type: energy carrier**

All energy carriers

**Target type: activity**

Consumption

**Target type: energy source**

Low-carbon energy source(s)

**Base year**

2019

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

517,364

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

0

**Target year**

2030

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

40

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

0

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

0

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

This target is part of Abs1, Int1 and Int3.

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**Please explain target coverage and identify any exclusions**

Project will impact main energy consuming plants in Europe.

**Plan for achieving target, and progress made to the end of the reporting year**

The objective of reaching 40% of the energy from renewable sources in 2030 will be achieved through signing long-term energy purchase contracts where the supplier of this supply guarantees TUBACEX the renewable origin of the energy. In order to achieve this goal, in 2022 we defined the scope of the project, as well identified potential suppliers. This project will impact the electricity consumption of the main energy consuming plants in Europe and will require the collaboration of international energy suppliers. During 2022 a request for quotation was send to a list of main suppliers. The aim is to close contracts and start sourcing green energy to our main consuming plants beginning of 2023.

**List the actions which contributed most to achieving this target**

**C4.2b**

**(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.**

**Target reference number**

Oth 1

**Year target was set**

2021

**Target coverage**

Business activity

**Target type: absolute or intensity**

Absolute

**Target type: category & Metric (target numerator if reporting an intensity target)**

Waste management

Other, please specify

Percentage of recycled materials consumed.

**Target denominator (intensity targets only)**

**Base year**

2019

**Figure or percentage in base year**

59.64

**Target year**

2030

**Figure or percentage in target year**

85

**Figure or percentage in reporting year**

71.4

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

46.3722397476

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

Not directly but indirectly it is because increasing the use of recycled materials reduces Scope 3 emissions from materials.

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**Please explain target coverage and identify any exclusions**

This target was set to improve the performance in circular economy and to reduce emissions related to material consumption. The target relates material consumption to the recycled material consumption. Therefore, the higher the percentage is, the better TUBACEX is doing in their circular economy performance.

These input materials are ferroalloys (Ni, FeMo, FeCr, etc.), stainless steel billets and bars, auxiliary gases (O<sub>2</sub>, N<sub>2</sub>, Ar), fats and oils and other additives.

**Plan for achieving target, and progress made to the end of the reporting year**

Public commitments have been established to reduce waste and improve water intensity in production plants. Likewise, progress has been made in the construction project of a recovery plant for the main waste to avoid its dumping, and the scrap recovery model has been extended to other Group plants (Austria). Likewise, during the year TUBACEX has worked on a project to improve the use of recycled material with a 14% reduction in the use of materials with a greater environmental footprint (Ni, Cr, Mo).

At the group level is due to the strike at the Acería de Álava plant that led to an increase in the purchase of steel from third parties, which are not counted as renewable products, although they are mostly manufactured from recycled products (scrap). In relation to the Steelworks, the reduction was also affected by the reduction in activity and a mix of steel grades that was not representative of the average of other years, with technical conditions that limited the use of scrap.

**List the actions which contributed most to achieving this target**

## C4.2c

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

---

**Target reference number**

NZ1

**Target coverage**

Company-wide

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

Int3

**Target year for achieving net zero**

2050

**Is this a science-based target?**

Yes, and this target has been approved by the Science Based Targets initiative

**Please explain target coverage and identify any exclusions**

This target covers scope 1 and 2 emissions in all our facilities and business divisions. This target is a SBT target that has been recently approved. The objective is to achieve net-zero by 2050 by reducing as much as we can energy consumption and raw materials consumption. To do so, we have several sustainability plans in place, and when no more emissions can be reduced, we will offset our residual emissions investing in nature-based solution projects.

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

Yes

**Planned milestones and/or near-term investments for neutralization at target year**

In order to reach this objective, we will continue our increase of green energy consumption by signing long term contracts with suppliers in which we ensure the renewable origin of the electricity. Also, we will decrease the scope 1 emissions by the deployment of energy efficiency project we are now deploying in our two main energy consuming plants. These projects are being developed with the support of a company expert on energy efficiency initiatives identification and deployment.

**Planned actions to mitigate emissions beyond your value chain (optional)**

In order to reach this objective, we will continue our increase of green energy consumption by signing long term contracts with suppliers in which we ensure the renewable origin of the electricity. Also, we will decrease the scope 1 emissions by the deployment of energy efficiency project we are now deploying in our two main energy consuming plants. These projects are being developed with the support of a company expert on energy efficiency initiatives identification and deployment.

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**Target reference number**

NZ2

**Target coverage**

Company-wide

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

Int4

**Target year for achieving net zero**

2050

**Is this a science-based target?**

Yes, and this target has been approved by the Science Based Targets initiative

**Please explain target coverage and identify any exclusions**

This target covers scope 3 emissions related to purchased goods and services in all our facilities and business divisions.

This target is a SBT target that has been recently approved.

The objective is to achieve net-zero by 2050 by reducing as much as we can energy consumption, raw materials consumption and improving circularity. To do so, we have several sustainability plans in place, and when no more emissions can be reduced, we will offset our residual emissions investing in nature-based solution projects.

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

Yes

**Planned milestones and/or near-term investments for neutralization at target year**

The decrease objective of scope 3 emissions will be achieved mainly through two different ways. The first is to decrease third party consumption by maximizing circularity. For these there is an ongoing project our two main energy and material consuming plants in which we are optimizing amount recycled versus bought to third parties. The second way we will reduce the scope 3 emissions is by choosing the suppliers with best performance in term of energy and emissions intensity. For this we are already measuring sustainability information from suppliers that sum-up 90% of our purchasing volume worldwide.

**Planned actions to mitigate emissions beyond your value chain (optional)**

-

## 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	1	0
To be implemented*	3	14,257
Implementation commenced*	3	12,078
Implemented*	4	21,627
Not to be implemented	0	0

### C4.3b

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

**Initiative category & Initiative type**

Energy efficiency in production processes

Other, please specify

Combination of process optimization, smart control systems, motors and drives, machine/equipment replacement

**Estimated annual CO2e savings (metric tonnes CO2e)**

3,572

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

Scope 1

**Voluntary/Mandatory**

Voluntary

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

1,277,632

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

3,960,560

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

>30 years

### Comment

Efficiency initiatives related to natural gas in Acería de Alava site. The energy efficiency project carried out during 2022 has identified several energy consumption optimization initiatives in our main energy consuming plants. One of the main initiatives is related to the improvement and update of the existing heat recovery system in some of our gas furnaces as the PIT, Hipertemple and pre-forging furnaces. The approximate saving has been calculated by a third-party consulting company together with our internal maintenance and engineering teams and the suppliers of the solution. The initiatives on the PIT furnaces have already been deployed and savings are being compared and measured through the new EMS system.

---

### Initiative category & Initiative type

Energy efficiency in production processes

Other, please specify

Combination of process optimization, smart control systems, motors and drives, machine/equipment replacement

### Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

0

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

Scope 2 (market-based)

### Voluntary/Mandatory

Voluntary

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

447,386

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

1,140,615

### Payback period

1-3 years

### Estimated lifetime of the initiative

>30 years

### Comment

Efficiency initiatives related to electricity in Acería de Alava site. The energy efficiency project carried out during 2022 has identified several electricity consumption optimization initiatives in our main energy consuming plant. Some of these initiatives are related to the installation of VSD and control systems in our EAF and AOD extraction fans, optimization of the direct water, installation of new VSD air compressors as well as defining the control system of the compressor station. These initiatives will not have a direct impact on reduction of CO<sub>2</sub> emissions since Acería de Alava is already supplied by 100% renewable electricity, however they will have a big impact in our energy intensity figures.



**Initiative category & Initiative type**

Energy efficiency in production processes

Other, please specify

Combination of process optimization, smart control systems, motors and drives, machine/equipment replacement

**Estimated annual CO2e savings (metric tonnes CO2e)**

2,867

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

Scope 1

**Voluntary/Mandatory**

Voluntary

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

944,919

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

2,929,190

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

&gt;30 years

**Comment**

During 2022 we continued deploying the gas consumption efficiency projects in the rest of our sites. The first assessments carried out by a third-party consulting company have identified similar energy consumption optimization opportunities as the ones identified and executed in Acería de Álava. During the following month we will carry out detailed business cases to prioritize investments depending on the economic and the emission savings. The project will follow the same methodology performed in Acería de Álava with multiple visits to the plants as well as meetings with our internal maintenance and engineering teams and third-party suppliers of solutions.

**Initiative category & Initiative type**

Waste reduction and material circularity

Product/component/material recycling

**Estimated annual CO2e savings (metric tonnes CO2e)**

6,264

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

Scope 3 category 1: Purchased goods &amp; services

**Voluntary/Mandatory**

Voluntary

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

1,976,891

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

0

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

&gt;30 years

**Comment**

In 2022 we have continued increasing the amount of recycled material. This is the result of a project carried out in previous years in all our downstream steel processing plants, that enables a controlled classification of our internal generated scrap, and its reuse in our steel making operation. This process guarantees the maximum quality of the scrap, reducing residuals, which is usually the limiting factor to increase scrap in high alloys steels. Scrap usage reduces the net need for key materials like nickel, ferro chrome and molybdenum, which have high scope 3 emission factors, thus reducing our emission intensity.

**Initiative category & Initiative type**

Low-carbon energy consumption

Other, please specify

Green H2 Production

**Estimated annual CO2e savings (metric tonnes CO2e)**

2,992

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

Scope 1

Scope 3 category 1: Purchased goods &amp; services

**Voluntary/Mandatory**

Voluntary

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

0

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

10,500,000

**Payback period**

No payback

**Estimated lifetime of the initiative**

21-30 years

**Comment**

In 2022 we developed a project, currently in assessment phase, to replace partially the use of natural gas with green H2. Part of the H2 produced would be blended with the natural gas for internal consumption and the rest injected in the public distribution network. The H2 would be produced with electrolyzers on-site with a supply of renewable electricity. The O2 produced in the electrolysis would also reduce our need to purchase external supplied O2, transported by truck to our facilities, further reducing our emissions.

**Initiative category & Initiative type**

Energy efficiency in production processes

Other, please specify

Combination of process optimization, smart control systems, motors and drives, machine/equipment replacement

**Estimated annual CO2e savings (metric tonnes CO2e)**

150

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

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

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

140,000

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

500,000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

&gt;30 years

**Comment**

In the second half of 2021, various efficiency initiatives related to electricity were started at the SBER and SBT site. These measures were continued in 2022 and 2023.

These initiatives will not have a direct impact on reducing CO2 emissions as SBER is already powered by 100% renewable electricity. However, these do have an impact on our energy efficiency.

In the SBT area, 2 powerful air compressors are being replaced by 2 newer, more energy-efficient models. Energy savings of ~4% can be expected here. Furthermore, a

further ~70% of the electrical energy used could be recovered via heat recovery and fed into the hot water network. The replacement of the compressors is expected to take place in November 2023. The integration of heat recovery is expected in several stages from 2024.

**Initiative category & Initiative type**

Waste reduction and material circularity  
 Product/component/material recycling

**Estimated annual CO2e savings (metric tonnes CO2e)**

100

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

Scope 3 category 1: Purchased goods & services

**Voluntary/Mandatory**

Voluntary

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

80,000

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

15,000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

>30 years

**Comment**

In 2022 SBER has started collecting the metal dust produced in production and handing it over to a disposal company, which processes it, presses it into bricks and returns them to steel works. This means that around 100 t of metal dust are processed back into steel each year this way.

**Initiative category & Initiative type**

Low-carbon energy consumption  
 Other, please specify  
 District heating

**Estimated annual CO2e savings (metric tonnes CO2e)**

230

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

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

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

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

**Payback period**

No payback

**Estimated lifetime of the initiative**

6-10 years

**Comment**

At the beginning of this year, the hot water supply for the site was switched from gas to district heating from biomass. For this purpose, a contract was concluded with a local energy supplier and the site was connected to the district heating network.

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**Initiative category & Initiative type**

Waste reduction and material circularity  
Product/component/material recycling

**Estimated annual CO2e savings (metric tonnes CO2e)**

3

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

Scope 3 category 1: Purchased goods & services

**Voluntary/Mandatory**

Voluntary

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

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

**Payback period**

No payback

**Estimated lifetime of the initiative**

>30 years

**Comment**

This year we started testing various packaging alternatives for the packaging of regular tubes as well as coils. This packaging consists largely of renewable materials (wooden soft board) and could significantly reduce the use of plastic and the necessary wood.

### C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	<p>Tubacex annually analyses the different regulatory requirements they must comply with and ensures their completion. Additionally, Tubacex has a budget for energy efficiency measures, such as lighting replacement or energy-efficient equipment replacement. Regarding low-carbon investments, Tubacex is always searching for new R&amp;D projects and emission reduction initiatives that help reduce their impact on climate change, such as the creation of a new material recycling installation.</p> <p>Finally, as part of their climate change commitments and the initiatives they have in place, Tubacex committed to the SBTi and they have now validated their targets.</p>
Dedicated budget for energy efficiency	<p>Tubacex annually analyses the different regulatory requirements they must comply with and ensures their completion. Additionally, Tubacex has a budget for energy efficiency measures, such as lighting replacement or energy-efficient equipment replacement. Regarding low-carbon investments, Tubacex is always searching for new R&amp;D projects and emission reduction initiatives that help reduce their impact on climate change, such as the creation of a new material recycling installation.</p> <p>Finally, as part of their climate change commitments and the initiatives they have in place, Tubacex committed to the SBTi and they have now validated their targets.</p>
Dedicated budget for low-carbon product R&D	<p>TUBACEX annually analyses the different regulatory requirements they have to comply with and ensures their completion. Additionally, TUBACEX has a budget for energy efficiency measures, such as lighting replacement or energy-efficient equipment replacement. Regarding low-carbon investments, TUBACEX is always searching for new R&amp;D projects and emission reduction initiatives that help reduce their impact on climate change, such as the creation of a new material recycling installation.</p> <p>Finally, as part of their climate change commitments and the initiatives they have in place, TUBACEX committed to the SBTi and they have now validated their targets.</p> <p>As of today, &gt;60% of the R&amp;D expenditure is dedicated to developments targeting, directly or indirectly, the green economy (hydrogen &amp; renewables), CO2 emissions reduction or circular economy.</p>
Dedicated budget for other emissions reduction activities	<p>TUBACEX annually analyses the different regulatory requirements they have to comply with and ensures their completion. Additionally, TUBACEX has a budget for energy efficiency measures, such as</p>

	<p>lighting replacement or energy-efficient equipment replacement. Regarding low-carbon investments, Tubacex is always searching for new R&amp;D projects and emission reduction initiatives that help reduce their impact on climate change, such as the creation of a new material recycling installation.</p> <p>Finally, as part of their climate change commitments and the initiatives they have in place, TUBACEX committed to the SBTi and they have now validated their targets.</p> <p>As of today, &gt;60% of the R&amp;D expenditure is dedicated to developments targeting, directly or indirectly, the green economy (hydrogen &amp; renewables), CO2 emissions reduction or circular economy.</p>
<p>Other SBTi Commitment</p>	<p>TUBACEX annually analyses the different regulatory requirements they must comply with and ensures their completion. Additionally, TUBACEX has a budget for energy efficiency measures, such as lighting replacement or energy-efficient equipment replacement. Regarding low-carbon investments, Tubacex is always searching for new R&amp;D projects and emission reduction initiatives that help reduce their impact on climate change, such as the creation of a new material recycling installation.</p> <p>Finally, as part of their climate change commitments and the initiatives they have in place, Tubacex committed to the SBTi and they have now validated their targets.</p>

## 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)**

**Description of product(s) or service(s)**



The company has decided to position itself as a supplier of tubular products in high nickel alloys for Ultra Super Critical (USC) and Advanced Ultra Super Critical (AUSC) power plants. This type of material allows steam to reach temperatures of up to 700°C, improving equipment performance and significantly reducing carbon dioxide emissions. AUSC technology is designed to help power plants burn less coal for electricity production while reducing carbon dioxide (CO2) emissions. AUSC power plants can potentially operate at temperatures and pressures higher than current state-of-the-art coal-fired power plants — about 25 percent more efficient than the average U.S. coal-fired power plant fleet, and 10 percent more efficient than state-of-the-art coal-fired power plants. AUSC power plants would require less coal per megawatt-hour, resulting in lower emissions of CO2 and mercury, and lower fuel costs per megawatt.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

**Functional unit used**

**Reference product/service or baseline scenario used**

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

**Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario**

**Explain your calculation of avoided emissions, including any assumptions**

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

**C-ST4.9**

**(C-ST4.9) Disclose your organization’s best available techniques as a percentage of total plant capacity.**

	<b>% of total plant capacity</b>	<b>Primary reason for not having technique</b>	<b>Comment</b>



Electric arc furnace: Scrap preheating		Improvement potential considered insignificant	
Electric arc furnace: Oxy-fuel burners			
Electric arc furnace: Oxygen blowing for liquid steel oxidation or post combustion			
Electric arc furnace: Integrated, real-time process control and monitoring systems	100	Improvement potential considered insignificant	
Casting: Absence of soaking pits and primary rolling of ingots			
Casting: Near net shape casting, e.g. thin slab, thin strip, etc.	25	Improvement potential considered insignificant	
Hot rolling mill: Hot charging	55	Improvement potential considered insignificant	
Hot rolling mill: Recuperative/regenerative burners			
Hot rolling mill: Walking beam furnace	100	Improvement potential considered insignificant	
Hot rolling mill: Variable speed drives on combustion air fans of reheat furnace			
Other			

## 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

#### 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?	
Row 1	No

## C5.2

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

#### Scope 1

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO<sub>2</sub>e)**

67,340

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

#### Scope 2 (location-based)

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO<sub>2</sub>e)**

43,949.02

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

#### Scope 2 (market-based)

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO<sub>2</sub>e)**

72,789.76

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

### Scope 3 category 1: Purchased goods and services

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

272,665

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

### Scope 3 category 2: Capital goods

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

45,696

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

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

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

19,022

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

#### Scope 3 category 4: Upstream transportation and distribution

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

1,228

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

#### Scope 3 category 5: Waste generated in operations

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

92

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

#### Scope 3 category 6: Business travel

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

3,150

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

### **Scope 3 category 7: Employee commuting**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

### **Scope 3 category 8: Upstream leased assets**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

### **Scope 3 category 9: Downstream transportation and distribution**

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

10,131

**Comment**

Even if Tubacex calculated its emissions in the past, in 2019 three new enterprises were added to the group (NTS Middle East, NTS Saudi and Promet). Therefore, 2019 year was chosen as the base year so that emissions are comparable.

### **Scope 3 category 10: Processing of sold products**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

**Scope 3 category 11: Use of sold products**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

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

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

**Scope 3 category 13: Downstream leased assets**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

**Scope 3 category 14: Franchises**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

**Scope 3 category 15: Investments**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

**Scope 3: Other (upstream)**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

**Scope 3: Other (downstream)**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

## C5.3

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

European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations

ISO 14064-1

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Scope 2 Guidance

The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

Other, please specify

GRI, ISAE 3410 (IAASB)

## C6. Emissions data

### C6.1

**(C6.1) What were your organization’s gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?**

#### Reporting year

---

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

54,811

**Start date**

January 1, 2022

**End date**

December 31, 2022

**Comment**

Increased our CO<sub>2</sub>e emissions due to recovery of activity after the strike.

#### Past year 1

---

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

28,157

**Start date**

January 1, 2021

**End date**

December 31, 2021

**Comment**



### Past year 2

---

**Gross global Scope 1 emissions (metric tons CO2e)**

49,445

**Start date**

January 1, 2020

**End date**

December 31, 2020

**Comment**

### Past year 3

---

**Gross global Scope 1 emissions (metric tons CO2e)**

67,340

**Start date**

January 1, 2019

**End date**

December 31, 2019

**Comment**

## 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**

Because the information available for some countries is limited, the market-based figure is a mixed figure, as we used both location-based emission factors and market-based emission factors. We used a market-based approach for Spain.

## C6.3

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

### Reporting year

---

**Scope 2, location-based**

20,778

**Scope 2, market-based (if applicable)**

16,361

**Start date**

January 1, 2022

**End date**

December 31, 2022

**Comment**

Tubacex uses renewable electricity (PPA), so the emissions are lower.

**Past year 1**

---

**Scope 2, location-based**

28,190

**Scope 2, market-based (if applicable)**

18,108

**Start date**

January 1, 2021

**End date**

December 31, 2021

**Comment**

**Past year 2**

---

**Scope 2, location-based**

35,325

**Scope 2, market-based (if applicable)**

21,401

**Start date**

January 1, 2020

**End date**

December 31, 2020

**Comment**

**Past year 3**

---

**Scope 2, location-based**

43,949

**Scope 2, market-based (if applicable)**

72,790

**Start date**

January 1, 2019

**End date**

December 31, 2019

**Comment**

Scope 2 emissions are emissions related to the use of electricity purchased outside the organization and which has no renewable origin.

**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)**

246,395

**Emissions calculation methodology**

Hybrid method

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

5

**Please explain**

This Scope 3 emissions calculation was done in 2021 and 2022 based on the GHG Protocol’s methodology. This category includes all upstream (i.e., cradle-to-gate) emissions from the production of products and services purchased in the reporting year. Tubacex has reviewed all its expenses to identify which are the main suppliers and focused all efforts on trying to reduce emissions associated with purchased goods and services. In order to do so, Tubacex created a set of forms to be sent to the most relevant suppliers where they will be asked about their carbon footprint so that they can

help calculating Tubacex's carbon footprint. To calculate this category's emissions Tubacex used their ERP system to know the amount of purchased good and services and then used emission factors from different sources, such as Ecoinvent, UNESID and ISR. However, the information about Nickel was obtained from the supplier. The idea is to gather all this information from the suppliers in the future.

## Capital goods

---

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

8,181

### Emissions calculation methodology

Spend-based method

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

0

### Please explain

This category includes all upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year. Capital goods are final products that have an extended lifetime and are used by the company to manufacture a product; provide a service; or sell, store, and deliver merchandise. Tubacex calculated the emissions related to capital goods using GHG Protocol's scope 3 emissions calculator, where Tubacex entered expenditure values and obtained GHG emissions.

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

---

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

14,230

### Emissions calculation methodology

Fuel-based method

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

100

### Please explain

These emissions include the GHG emitted related to the transmission and distribution of electricity as well as to the consumption of other fuels. The activity data was obtained

from the suppliers and emission factors from DEFRA and other emission factors databased were used to calculate this category's emissions.

### Upstream transportation and distribution

---

#### Evaluation status

Relevant, calculated

#### Emissions in reporting year (metric tons CO<sub>2</sub>e)

6,153

#### Emissions calculation methodology

Distance-based method

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

100

#### Please explain

This category includes emissions from transportation and distribution of products or services purchased in the reporting year. This category also includes third-party transportation and distribution services purchased. To calculate those emissions DEFRA's emission factors were used as well as distance travelled. Suppliers are sent a model to be filled with information about mode of transportation and amount (weight).

### Waste generated in operations

---

#### Evaluation status

Relevant, calculated

#### Emissions in reporting year (metric tons CO<sub>2</sub>e)

108

#### Emissions calculation methodology

Waste-type-specific method

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

0

#### Please explain

This category includes emissions from third-party disposal and treatment of waste generated in the reporting company's owned or controlled operations in the reporting year. This category includes emissions from the disposal of both solid waste and wastewater. Tubacex calculated waste emissions based on the tons of waste generated and their disposal type and the emission factors from DEFRA. For instance, waste was recycled, treated, landfilled, and recovered.

### Business travel

---

#### Evaluation status

Relevant, calculated

### **Emissions in reporting year (metric tons CO<sub>2</sub>e)**

259

### **Emissions calculation methodology**

Supplier-specific method

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

100

### **Please explain**

This category includes emissions from employees' transportation for business-related activities. Tubacex calculated the emissions related to business travel using the following information: distance travelled, transportation type, number of employees, number of travels per year and the correspondent emission factor from DEFRA. The information about the different travels was obtained from the travel agency.

---

## **Employee commuting**

### **Evaluation status**

Not relevant, explanation provided

### **Please explain**

This category includes emissions from the transportation of employees between their homes and their worksites. Tubacex is aware of the impacts their activities have on climate change. However, Tubacex considers that employee commuting emissions represent less than 1% of all scope 3 emissions and has therefore not included them in the calculation. This does not mean that Tubacex will not include them in the future. This is the first reporting year to the CDP and Tubacex will keep improving the quality and quantity of reported data, so Tubacex will improve year after year and try to calculate as many emissions related to their activities as possible. To do so, a survey can be done to gather all the information needed from the employees.

---

## **Upstream leased assets**

### **Evaluation status**

Not relevant, explanation provided

### **Please explain**

This category includes emissions from the operation of assets that are leased by the reporting company in the reporting year and not already included in the reporting company's scope 1 or scope 2 inventories. The emissions related to this category have not been therefore calculated because they are included in Scopes 1 and 2 emissions.

---

## **Downstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

3,018

**Emissions calculation methodology**

Distance-based method

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

0

**Please explain**

This category includes emissions that occur from transportation and distribution of sold products in vehicles and facilities not owned or controlled by the reporting company.

Tubacex delivers their products by sea, air and road. The subcontracted companies provide Tubacex with the number of each mode of transport (sea, air, road, and train) and type of vehicle (truck, and trailer), as well as with the kind of fuel they use (diesel, petrol, etc.) for the transportation of their products. Since Tubacex sets the routes, they know the distances travelled by each vehicle as well as the quantity of each product (weight) in each vehicle. Using the value for fuel consumption and the distance covered by each vehicle, Tubacex is able to calculate the total fuel consumption. Then, using DEFRA's emission factors, Tubacex can calculate the emissions for this category.

**Processing of sold products**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Not relevant because all our products are not processed. They are used as they are delivered.

**Use of sold products**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Not relevant because our products don't emit during their direct use.

**End of life treatment of sold products**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Not relevant because all our products are 100% recyclable.

**Downstream leased assets**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Tubacex does not own any downstream leased assets.

**Franchises**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Tubacex does not have any franchises.

**Investments**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Tubacex has not identified any investments that generate emissions.

**Other (upstream)**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Tubacex has not identified any other upstream emissions.

**Other (downstream)**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Tubacex has not identified any other downstream emissions.

## C6.5a

**(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.**

**Past year 1**

---

**Start date**

January 1, 2021

**End date**

December 31, 2021

**Scope 3: Purchased goods and services (metric tons CO<sub>2</sub>e)**

144,282

**Scope 3: Capital goods (metric tons CO<sub>2</sub>e)**



15.717

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)  
(metric tons CO<sub>2</sub>e)**

3,746

**Scope 3: Upstream transportation and distribution (metric tons CO<sub>2</sub>e)**

4,720

**Scope 3: Waste generated in operations (metric tons CO<sub>2</sub>e)**

33

**Scope 3: Business travel (metric tons CO<sub>2</sub>e)**

55

**Scope 3: Employee commuting (metric tons CO<sub>2</sub>e)**

**Scope 3: Upstream leased assets (metric tons CO<sub>2</sub>e)**

**Scope 3: Downstream transportation and distribution (metric tons CO<sub>2</sub>e)**

1,575

**Scope 3: Processing of sold products (metric tons CO<sub>2</sub>e)**

**Scope 3: Use of sold products (metric tons CO<sub>2</sub>e)**

**Scope 3: End of life treatment of sold products (metric tons CO<sub>2</sub>e)**

**Scope 3: Downstream leased assets (metric tons CO<sub>2</sub>e)**

**Scope 3: Franchises (metric tons CO<sub>2</sub>e)**

**Scope 3: Investments (metric tons CO<sub>2</sub>e)**

**Scope 3: Other (upstream) (metric tons CO<sub>2</sub>e)**

**Scope 3: Other (downstream) (metric tons CO<sub>2</sub>e)**

**Comment**

**Past year 2**

---

**Start date**

January 1, 2020

**End date**

December 31, 2020

**Scope 3: Purchased goods and services (metric tons CO2e)**

142,122

**Scope 3: Capital goods (metric tons CO2e)**

15,875

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)  
(metric tons CO2e)**

14,411

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

810

**Scope 3: Waste generated in operations (metric tons CO2e)**

55

**Scope 3: Business travel (metric tons CO2e)**

85

**Scope 3: Employee commuting (metric tons CO2e)**

**Scope 3: Upstream leased assets (metric tons CO2e)**

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

6,371

**Scope 3: Processing of sold products (metric tons CO2e)**

**Scope 3: Use of sold products (metric tons CO2e)**

**Scope 3: End of life treatment of sold products (metric tons CO2e)**

**Scope 3: Downstream leased assets (metric tons CO2e)**

**Scope 3: Franchises (metric tons CO2e)**

**Scope 3: Investments (metric tons CO2e)**

**Scope 3: Other (upstream) (metric tons CO2e)**

**Scope 3: Other (downstream) (metric tons CO2e)**

**Comment**

**Past year 3**

---

**Start date**

January 1, 2019

**End date**

December 31, 2019

**Scope 3: Purchased goods and services (metric tons CO2e)**

272,655

**Scope 3: Capital goods (metric tons CO2e)**

45,696

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)  
(metric tons CO2e)**

19,022

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

1,228

**Scope 3: Waste generated in operations (metric tons CO2e)**

92

**Scope 3: Business travel (metric tons CO2e)**

3,150

**Scope 3: Employee commuting (metric tons CO2e)**

**Scope 3: Upstream leased assets (metric tons CO2e)**

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

10,131

**Scope 3: Processing of sold products (metric tons CO2e)**

**Scope 3: Use of sold products (metric tons CO2e)**

**Scope 3: End of life treatment of sold products (metric tons CO2e)**

**Scope 3: Downstream leased assets (metric tons CO2e)**

**Scope 3: Franchises (metric tons CO2e)**

**Scope 3: Investments (metric tons CO2e)**

**Scope 3: Other (upstream) (metric tons CO2e)**

**Scope 3: Other (downstream) (metric tons CO2e)**

**Comment**

## 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**

0.297

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

71,172

**Metric denominator**

Other, please specify

GVA

**Metric denominator: Unit total**

239,311

**Scope 2 figure used**

Market-based

**% change from previous year**

54

**Direction of change**

Increased

**Reason(s) for change**

Other, please specify

Increased activity due to the end of the strike

**Please explain**

Increased activity due to the end of the strike

---

**Intensity figure**

0.000099583

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

71,172

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

714,700,000

**Scope 2 figure used**

Market-based

**% change from previous year**

21

**Direction of change**

Decreased

**Reason(s) for change**

Change in renewable energy consumption

**Please explain**

The decrease in the intensity of emissions by revenue is mainly because of the process initiated by TUBACEX of analysis and negotiation for the extension of the long-term electricity supply agreement (PPA) for renewable energy sources, currently active in the Spanish plants.

## C-ST6.14

**(C-ST6.14) State your organization's emissions and energy intensities by steel production process route.**

**Process route**

Scrap-electric arc furnace

**Emissions intensity figure, metric tons CO2e per metric ton of crude steel production**

0.43

**Energy intensity figure, GJ (LHV) per metric ton of crude steel production**

14.02

**Methodology applied**

GHG Protocol

**Comment**

2022 has a 12% improvement in emission intensity in relationship to 2021, a year heavily impacted by the labor dispute impact in activity, but also a 4.4% improvement in relationship to 2019, our reference year for SBTi objectives. The main reason is the energy efficiency projects related to natural gas consumptions.

## 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	54,810.55	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	0.406	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	0.408	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)
---------------------	--------------------------------------

Austria	4,673
United Arab Emirates	0
India	4,689
Italy	2,074
Norway	0
Spain	40,967
United States of America	2,405
Canada	0
Saudi Arabia	0
Singapore	0
Thailand	0

### C7.3

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

By business division

By facility

By activity

### C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
AMERICA	2,406
ASIA	4,689
EXTRUSION	14,254
STEEL	31,377
CORPORATE	0
SPECIAL COMPONENTS	2,074
TRADING & SERVICES	10

### C7.3b

**(C7.3b) Break down your total gross global Scope 1 emissions by business facility.**

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
ACERALAVA	31,377	43.035	-3.003
DURANT	80.29	33.972	-96.365
IBF-FITTINGS DIVISION	1,466.71	45.058	9.625

IBF-PIPES DIVISION	607.3	45.494	8.951
NTS	0.05	58.934	5.604
SALEM	2,325.67	41.355	-80.409
SBER	4,673.69	47.7097	16.034
TAT	0	13.583	100.625
AMURRIO	6,473.38	43.037	-3.001
LLODIO	3,107.09	43.136	-2.972
TXP	4,689.05	20.1997	72.78
TTA	0		
TM	0		

### C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Bars, billets and ingots	19,583.03
Accessories and special components up to 72"	3,239.39
Seamless stainless steel tubes up to 72"	31,988
Stainless steel machined components	0.58

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

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

	Gross Scope 1 emissions, metric tons CO2e	Comment
Steel production activities	21,235.727	There is only one facility that produces steel within the group so only emissions related to that facility (Acería de Álava) are included in this section.

### 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)
Austria		
United Arab Emirates		3,909.72



India		8,507.36
Italy		1,431.93
Norway		
Saudi Arabia		
Spain		
United States of America		2,512.11
Canada		
Singapore		
Thailand		

## C7.6

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

- By business division
- By facility
- By activity

### C7.6a

**(C7.6a) Break down your total gross global Scope 2 emissions by business division.**

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
AMERICA		2,512
ASIA		8,507
EXTRUSION		
STEEL		
CORPORATE		
SPECIAL COMPONENTS		5,342
TRADING & SERVICES		

### C7.6b

**(C7.6b) Break down your total gross global Scope 2 emissions by business facility.**

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
ACERALAVA		0
DURANT		1,814.72

IBF-FITTINGS DIVISION		725.28
IBF-PIPES DIVISION		706.65
NTS		3,909.72
SALEM		
SBER		697.38
TAT		
TTA		
SERVICES		
TM		
AMURRIO		
LLODIO		
TXP		8,507.36

### 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)
Bars, billets and ingots		0
Accessories and special components up to 72"		1,001.81
Seamless stainless steel tubes up to 72"		12,348.21
Stainless steel machined components		3,010.99

### 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

### C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

**(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.**

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Steel production activities	0	0	There is only one facility that produces steel within the group so only emissions related to that facility (Acería de Álava) are included in this section.

### C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Increased

### C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption				
Other emissions reduction activities				
Divestment				
Acquisitions				
Mergers				
Change in output	24,907	Increased	54	The increase is due to the recovery of activity after a general strike that lasted several months at the steel mill.
Change in methodology				
Change in boundary				

Change in physical operating conditions				
Unidentified				
Other				

### 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	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

## 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)	Unable to confirm heating value	0	242,495.53	242,495.53
Consumption of purchased or acquired electricity		79,504	84,123.43	
Total energy consumption		79,504	326,618	406,122.97

## C-ST8.2a

**(C-ST8.2a) Report your organization’s energy consumption totals (excluding feedstocks) for steel production activities in MWh.**

### Consumption of fuel (excluding feedstocks)

#### Heating value

Unable to confirm heating value

#### MWh consumed from renewable sources inside steel sector boundary

#### MWh consumed from non-renewable sources inside steel sector boundary (excluding recovered waste heat/gases)

127,684.17

#### MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside steel sector boundary

0

#### Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside steel sector boundary

127,684.17

### Consumption of purchased or acquired electricity

#### MWh consumed from renewable sources inside steel sector boundary

63,658.05

#### MWh consumed from non-renewable sources inside steel sector boundary (excluding recovered waste heat/gases)

**MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside steel sector boundary**

**Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside steel sector boundary**

**Consumption of self-generated non-fuel renewable energy**

---

**MWh consumed from renewable sources inside steel sector boundary**

**MWh consumed from non-renewable sources inside steel sector boundary (excluding recovered waste heat/gases)**

**MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside steel sector boundary**

**Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside steel sector boundary**

**Total energy consumption**

---

**MWh consumed from renewable sources inside steel sector boundary**  
63,658.05

**MWh consumed from non-renewable sources inside steel sector boundary (excluding recovered waste heat/gases)**  
127,684.17

**MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside steel sector boundary**

**Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside steel sector boundary**  
191,342.2

## **C8.2b**

**(C8.2b) Select the applications of your organization’s consumption of fuel.**

	Indicate whether your organization undertakes this fuel application

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

### C8.2c

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

**Sustainable biomass**

---

**Heating value**

**Total fuel MWh consumed by the organization**

0

**Comment**

**Other biomass**

---

**Heating value**

**Total fuel MWh consumed by the organization**

0

**Comment**

**Other renewable fuels (e.g. renewable hydrogen)**

---

**Heating value**

**Total fuel MWh consumed by the organization**

0

**Comment**

## Coal

---

### Heating value

#### Total fuel MWh consumed by the organization

0

#### Comment

## Oil

---

### Heating value

#### Total fuel MWh consumed by the organization

0

#### Comment

## Gas

---

### Heating value

Unable to confirm heating value

#### Total fuel MWh consumed by the organization

242,495.53

#### Comment

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

---

### Heating value

#### Total fuel MWh consumed by the organization

2,046

#### Comment

DIESEL OIL (MOBILE SOURCES)

## Total fuel

---

### Heating value

Unable to confirm heating value

#### Total fuel MWh consumed by the organization

244,541

#### Comment



## C8.2e

**(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.**

---

### Country/area of low-carbon energy consumption

Spain

### Sourcing method

Purchase from an on-site installation owned by a third party (on-site PPA)

### Energy carrier

Electricity

### Low-carbon technology type

Renewable energy mix, please specify  
Spain

### Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

79,504

### Tracking instrument used

No instrument used

### Country/area of origin (generation) of the low-carbon energy or energy attribute

Spain

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

No

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

### Comment

In September 2019 Tubacex signed a contract with REPSOL COMERCIALIZADORA DE ELECTRICIDAD Y GAS, S.L.U. for the supply of 80 GWh (PPA) in Tubacex, Tubacex Services, TTI, Tubacex Taylor and Acerálava. According to the ACUERDO SOBRE EL ETIQUETADO DE LA ELECTRICIDAD RELATIVO A LA ENERGÍA PRODUCIDA EN EL AÑO 2022, the mix correspondent to REPSOL COMERCIALIZADORA DE ELECTRICIDAD Y GAS, S.L.U. is 100% renewables,

obtaining an A score regarding their average environmental impact, the highest score available.

## C8.2g

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

---

**Country/area**

Austria

**Consumption of purchased electricity (MWh)**

24,332.21

**Consumption of self-generated electricity (MWh)**

0

**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]**

24,332.21

---

**Country/area**

Canada

**Consumption of purchased electricity (MWh)**

0

**Consumption of self-generated electricity (MWh)**

0

**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**

United Arab Emirates

**Consumption of purchased electricity (MWh)**

0

**Consumption of self-generated electricity (MWh)**

0

**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**

India

**Consumption of purchased electricity (MWh)**

0

**Consumption of self-generated electricity (MWh)**

0

**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**

Italy

**Consumption of purchased electricity (MWh)**

4,379

**Consumption of self-generated electricity (MWh)**

0

**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]**

4,379

---

**Country/area**

Norway

**Consumption of purchased electricity (MWh)**

0

**Consumption of self-generated electricity (MWh)**

0

**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**

Saudi Arabia

**Consumption of purchased electricity (MWh)**

0

**Consumption of self-generated electricity (MWh)**

0

**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**

Singapore

**Consumption of purchased electricity (MWh)**

0

**Consumption of self-generated electricity (MWh)**

0

**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**

Spain

**Consumption of purchased electricity (MWh)**

116,748.62

**Consumption of self-generated electricity (MWh)**

0

**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]**

116,748.62

---

**Country/area**

United States of America

**Consumption of purchased electricity (MWh)**

8,978.8

**Consumption of self-generated electricity (MWh)**

0

**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]**

8,978.8

---

**Country/area**

Thailand

**Consumption of purchased electricity (MWh)**

9,188.81

**Consumption of self-generated electricity (MWh)**

0

**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]**

9,188.81

## C-ST8.3

**(C-ST8.3) Disclose details on your organization's consumption of feedstocks for steel production activities.**

---

**Feedstocks**

Coke

**Total consumption**

4.05

**Total consumption unit**

**Dry or wet basis?**

Dry basis

**Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit**

3.01

**Heating value of feedstock, MWh per consumption unit**

**Heating value**

LHV

---

**Feedstocks**

Natural gas

**Total consumption**

242,496

**Total consumption unit**

**Dry or wet basis?**

Dry basis

**Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit**

0.2

**Heating value of feedstock, MWh per consumption unit**

**Heating value**

LHV

## C9. Additional metrics

### C9.1

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

---

**Description**

Waste

**Metric value**

86,591

**Metric numerator**

86,591 metric ton

**Metric denominator (intensity metric only)**

N/A

**% change from previous year**

2.22

**Direction of change**

Increased

**Please explain**

The increase is due to the recovery of activity after a general strike that lasted several months at the steel mill. Despite the increase registered in the last year, TUBACEX has managed to recycle or reuse 81.3% of its waste, compared to 71.40% recycled in 2021.

**Description**

Energy usage

**Metric value**

163,627

**Metric numerator**

163,627 MWh (electricity)

**Metric denominator (intensity metric only)**

N/A

**% change from previous year**

**Direction of change**

**Please explain**

TUBACEX implemented an EMS, and advanced energy management system, at TTI and ACVA, allowing for energy consumption reduction thanks to real time monitoring. The savings identified so far are 40 GWh/y.

## C-ST9.3a

**(C-ST9.3a) Report your organization’s steel-related consumption, production and capacity figures by steel plant.**

	Metal scrap consumption (metric tons)	Blast furnace iron consumption (metric tons)	Direct reduced iron consumption (metric tons)	Crude steel production (metric tons)	Crude steel capacity (metric tons)
Electric arc furnace	58,119		0	49,385.41	80,000
Other					
Total					



## C-ST9.3b

**(C-ST9.3b) Report your organization's steel-related production outputs and capacities by product.**

Product	Production (metric tons)	Capacity (metric tons)	Comment
Hot-rolled steel	49,385.41	80,000	The increase is due to the recovery of activity after a general strike lasting several months at the steel mill.

## C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

**(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?**

	Investment in low-carbon R&D	Comment
Row 1	Yes	TUBACEX carries out a high level of R&D activity, consistently between 1% and 2% over sales. The program is reviewed and adjusted together with the company strategy, therefore evolving to adapt to new inputs. Within the R&D program there are projects related to new products development, new technologies, performance improvement, and basic research. Much of the budget is dedicated to new products development. The breakdown of the recent and future projects, related to sustainability is: - 30% of the budget is dedicated to products targeting the green economy (i.e., products for the hydrogen value chain). - 47% of the budget is associated to CO2 emissions reduction, either targeting better efficiency or gas market development. - 6% of the budget is related to circular economy, mainly dedicated to production processes improvement by waste reduction or valorization. In addition, TUBACEX is participating in and exploring different business initiatives, like a waste to H2 project, which has applied to the European Innovation Fund.

## C-ST9.6a

**(C-ST9.6a) Provide details of your organization's investments in low-carbon R&D for steel production activities over the last three years.**

### Technology area

Other, please specify

Green H2 Value Chain

**Stage of development in the reporting year**

Applied research and development

**Average % of total R&D investment over the last 3 years**

21

**R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)**

6,000,000

**Average % of total R&D investment planned over the next 5 years**

**Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan**

80% R&D efforts are connected to Energy Transition

---

**Technology area**

Other, please specify

CO2 emission reduction by clients

**Stage of development in the reporting year**

Pilot demonstration

**Average % of total R&D investment over the last 3 years**

21

**R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)**

6,000,000

**Average % of total R&D investment planned over the next 5 years**

**Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan**

80% R&D efforts are connected to Energy Transition

---

**Technology area**

Efficiency/recovery equipment on existing process plant

**Stage of development in the reporting year**

Pilot demonstration

**Average % of total R&D investment over the last 3 years**

20

**R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)**

6,000,000

**Average % of total R&D investment planned over the next 5 years**

**Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan**

80% R&D efforts are connected to Energy Transition

## 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**

 Tubacex 2022-Sustainability-Report eng.pdf

**Page/ section reference**

<https://www.tubacex.com/wp-content/uploads/2023/07/2022-Sustainability-Report.pdf>

**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 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**

**Page/ section reference**

<https://www.tubacex.com/wp-content/uploads/2022/04/Estado-de-informacion-no-financiera-2021-1.pdf>

**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: Capital goods

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

Scope 3: Upstream transportation and distribution

Scope 3: Waste generated in operations

Scope 3: Business travel

Scope 3: Upstream leased assets

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

**Page/section reference**

<https://www.tubacex.com/wp-content/uploads/2022/04/Estado-de-informacion-no-financiera-2021-1.pdf>

**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
C3. Business strategy	Alignment with a sustainable finance taxonomy	ISAE300	Our annual report was verified by EY based on the ISAE3000 standard. All emissions figures as well as energy figures and indicators were included in the verification report.  That report has been attached in sections above.
C4. Targets and performance	Progress against emissions reduction target	ISAE300	Our annual report was verified by EY based on the ISAE3000 standard. All emissions figures as well as energy figures and indicators were included in the

			<p>verification report.</p> <p>That report has been attached in sections above.</p>
C5. Emissions performance	Year on year change in emissions (Scope 1 and 2)	ISAE300	<p>Our annual report was verified by EY based on the ISAE3000 standard. All emissions figures as well as energy figures and indicators were included in the verification report.</p> <p>That report has been attached in sections above.</p>
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISAE300	<p>Our annual report was verified by EY based on the ISAE3000 standard. All emissions figures as well as energy figures and indicators were included in the verification report.</p> <p>That report has been attached in sections above.</p>
C7. Emissions breakdown	Year on year change in emissions (Scope 1 and 2)	ISAE300	<p>Our annual report was verified by EY based on the ISAE3000 standard. All emissions figures as well as energy figures and indicators were included in the verification report.</p> <p>That report has been attached in sections above.</p>
C8. Energy	Energy consumption	ISAE300	<p>Our annual report was verified by EY based on the ISAE3000 standard. All emissions figures as well as energy figures and indicators were included in the verification report.</p> <p>That report has been attached in sections above.</p>
C9. Additional metrics	Waste data	ISAE300	<p>Our annual report was verified by EY based on the ISAE3000 standard. All emissions figures as well as energy figures and indicators were included in the verification report.</p> <p>That report has been attached in sections above.</p>

## C11. Carbon pricing

### C11.1

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

### C11.1a

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

EU ETS

### C11.1b

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

EU ETS

**% of Scope 1 emissions covered by the ETS**

100

**% of Scope 2 emissions covered by the ETS**

0

**Period start date**

January 1, 2022

**Period end date**

December 31, 2022

**Allowances allocated**

12,401

**Allowances purchased**

0

**Verified Scope 1 emissions in metric tons CO<sub>2</sub>e**

28,817

**Verified Scope 2 emissions in metric tons CO<sub>2</sub>e**

0

**Details of ownership**

Facilities we own and operate

**Comment**

TUBACEX has only one facility affected by the EU ETS: Acería de Álava, located in Spain. The GHG emissions covered under this regulation are process emissions and

emissions derived from fuel consumption in fixed sources.

TUBACEX still has a certain amount of free assignments, but is aware that they will progressively reach 0 in 2035. In addition, we identified a climate risk associated with CBAM that will also affect us, so the company is strategically preparing to face this situation through technological improvements and emission reduction initiatives.

## C11.1d

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

TUBACEX takes climate change and related regulations very seriously. TUBACEX complies annually with all the requirements of the EU ETS regulation for the site affected by it. Additionally, TUBACEX checks, on an annual basis, that the other installations in the European Union are not affected by the regulation. To do that TUBACEX checks their installed capacity and production capacity using a bespoke tool. TTI Llodio and Amurrio, for example, could be affected by the EU ETS regulation if their installed capacity was higher than 20 MWt, but neither of those installations surpass the 20 MWt threshold.

Additionally, as part our global business strategy and commitments to fight climate change, we are continuously working to reduce our energy consumption and carbon footprint. As it has been stated before, with carbon taxes and trading schemes improving and evolving around the world, the current trend is to consider that carbon taxes could be implemented in a short-term perspective. We are very aware of this as well as of the impact that this may have on our business, resulting in financial impacts close to 10 million € for TUBACEX . To mitigate this risk of expanding carbon tax or trading schemes, we have implemented different initiatives such as energy efficiency measures, green economy measures, and circularity initiatives such as waste reduction and reuse initiatives.

In addition, we identified a climate risk associated with CBAM that will also affect us, so the company is strategically preparing to face this situation through technological improvements and emission reduction initiatives.

## 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?**

No, but we anticipate doing so in the next two years



## 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

Other, please specify

Compliance & onboarding

##### Details of engagement

Other, please specify

Included climate change in supplier selection / management mechanism Code of conduct featuring climate change KPIs Climate change is integrated into supplier evaluation processes

##### % of suppliers by number

70

##### % total procurement spend (direct and indirect)

90

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

10

##### Rationale for the coverage of your engagement

Responsible consumption and production are a target we need to meet in the short medium term. For this, the only way is to introduce ESG matters in the center of our processes and daily work, from the purchasing phase to the demand serving.

##### Impact of engagement, including measures of success

Including sustainability and other climate related issues along our homologation process makes our most closely related suppliers understand the importance it has for Tubacex which helps them develop their own sustainability strategy. 95% of the spend in suppliers that completed our ESG assessment during homologation.

##### Comment

Climate is one of the key aspects for which suppliers are evaluated along their homologation process. Suppliers are requested to answer questions related to:

- Environmental management system

- Compliance with applicable environmental laws and regulations
  - Environmental policies, practices, and expectations
  - Environmental training of staff
  - Environmental targets and objectives placed to improve environmental performance
  - Corporate annual environmental plan
  - Monitoring and tracking of energy consumption and conduct on-site energy audits
  - System in place to reduce the environmental impact of energy use and greenhouse gases
  - System in place to manage and monitor water withdrawals and consumption
  - Programs and/or procedures to reduce water use or reuse/recycle water
  - Programs and/or procedures to reduce or eliminate pollution and waste in its operations
  - Recycling program to reduce or eliminate pollution and waste in its operations
- Supplier answers are used for building up their climate management specific ratio and global ranking which is used as an input along the purchasing process. From purchasing department suppliers are informed that their answers regarding ESG are an additional decision factor for awarding the purchase orders which helps them understand the importance of the same and improve their overall value proposal.

### **Type of engagement**

Information collection (understanding supplier behavior)

### **Details of engagement**

Other, please specify

Request and collect their climate related strategy and certificates

### **% of suppliers by number**

70

### **% total procurement spend (direct and indirect)**

90

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

10

### **Rationale for the coverage of your engagement**

Responsible consumption and production are a target we need to meet in the short medium term. For this, the only way is to introduce ESG matters in the centre of our processes and daily work, from the purchasing phase to the demand serving.

### **Impact of engagement, including measures of success**

90% of the spent in suppliers that completed our ESG assessment.

### **Comment**

Climate is one of the key aspects for which suppliers are evaluated along their homologation process. Suppliers are requested to answer questions related to:

- Environmental management system

- Compliance with applicable environmental laws and regulations
  - Environmental policies, practices, and expectations
  - Environmental training of staff
  - Environmental targets and objectives placed to improve environmental performance
  - Corporate annual environmental plan
  - Monitoring and tracking of energy consumption and conduct on-site energy audits
  - System in place to reduce the environmental impact of energy use and greenhouse gases
  - System in place to manage and monitor water withdrawals and consumption
  - Programs and/or procedures to reduce water use or reuse/recycle water
  - Programs and/or procedures to reduce or eliminate pollution and waste in its operations?
  - Recycling program to reduce or eliminate pollution and waste in its operations
- Supplier answers are used for building up their climate management specific ratio and global ranking which is used as an input along the purchasing process. From purchasing department suppliers are informed that their answers regarding ESG are an additional decision factor for awarding the purchase orders which helps them understand the importance of the same and improve their overall value proposal.

### **Type of engagement**

Engagement & incentivization (changing supplier behavior)

### **Details of engagement**

Climate change performance is featured in supplier awards scheme

### **% of suppliers by number**

70

### **% total procurement spend (direct and indirect)**

90

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

10

### **Rationale for the coverage of your engagement**

Responsible consumption and production are a target we need to meet in the short medium term. For this, the only way is to introduce ESG matters in the centre of our processes and daily work, from the purchasing phase to the demand serving.

### **Impact of engagement, including measures of success**

We started measuring our suppliers in improvement in ESG ratings as an indicator of success.

### **Comment**

We provide feedback to our suppliers based on their ESG assessment.

**Type of engagement**

Innovation & collaboration (changing markets)

**Details of engagement**

Other, please specify

Promote innovative business models to boost decarbonization and circularity of waste.

**% of suppliers by number**

100

**% total procurement spend (direct and indirect)**

0

**% of supplier-related Scope 3 emissions as reported in C6.5****Rationale for the coverage of your engagement**

Promoting decarbonization and circularity in our own operations and well as in our suppliers' processes is a key aspect of Tubacex ESG strategy. Reducing our environmental impact, promoting our suppliers' and partners' decarbonization with an environmental assessment and a subsequent selection is key to achieve our Scope 3 goals. Tubacex has already identified the suppliers with higher impact in Scope 3 reduction to value "sustainable purchasing", with possible increases in purchase prices of materials with lower carbon footprint.

**Impact of engagement, including measures of success**

There are several strategic collaborations with suppliers and partners to improve our carbon footprint by means of reducing our energy consumptions, green energy purchases and boasting circularity. An example of them, one of the most significant in terms of environmental impact is the agreement with Remondis to reduce the amount of waste sent to landfills. This initiative shows the firm commitment in assuming extra costs to avoid damaging the environment. Is it also remarkable the agreement to purchase green energy in our Spanish plants with a subsequent deployment de the rest of European companies.

**Comment****C12.1b**

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

**Type of engagement & Details of engagement**

Collaboration & innovation

Collaborate with customers in creation and review of your climate transition plan

**% of customers by number**

100

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

100

**Please explain the rationale for selecting this group of customers and scope of engagement**

At TUBACEX, we have defined our purpose: to face the new challenges for human progress, providing advanced industrial products and services. We want to do so by contributing to the development of innovative solutions for the energy transition offering our technological capability to our customers and to business diversification.

We facilitate the industrialization of innovative technological solutions, moving towards business diversification. We scale high impact green technologies for sustainable growth from the design to its subsequent implementation in industrial processes; maintaining a proactive vision in emerging technologies that reduce the environmental footprint and foster the diversification of our business.

We collaborate with our customers on the development of innovative solutions that facilitate their transition. We work with our customers on the co-development of tubular solutions, making improvement proposals to the design that lead to better environmental performance.

**Impact of engagement, including measures of success**

Clients seek solutions that result in a reduction of their carbon footprint, being able to access all the necessary information to make it possible. Sometimes, this means joint co-development of advance solutions and value proposals, promoting our philosophy of open innovation. An example of this is the development of different solutions that solve specific problems in the industry in terms of energy efficiency, both in conventional energy sectors, and in proposals with high added value for new activity segments linked to new energies.

**C12.1d****(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.**

TUBACEX participates in leading initiatives that lead the energy transition. We believe in the importance of developing collaborative models to pool knowledge and technological synergies. For this reason, we are involved in associations and clusters for the energy transition, exploring new business models. We also explore new business and technology models along with start-ups.

As an example of this TUBACEX is leading the HY2DEC project. The objective of the project is to advance towards sustainable production and use of green hydrogen and oxygen, as well as CO<sub>2</sub> capture, to achieve a positive emissions balance. The project, which is part of CDTI's Misiones program, focuses on intensive industrial sectors such as steel and ceramics. The research areas include electrochemical hydrogen production, heat generation using green hydrogen as fuel, and CO<sub>2</sub> capture technologies. Each participating company has specific research objectives related to their expertise. The project, with a total budget of 5,872,941

EUR, is scheduled to be completed in 2025, and the scalability and industrialization of prototypes developed by the participants will be explored. We are also participating in digital projects that, through the use of artificial intelligence, optimizes a key production process, contributing to lower energy consumption and a reduction in CO2 emissions, aligned with our company's strategic sustainability purpose.

Some of the associations we are currently participating in:

- H2IT- Italian Association of Hydrogen and Fuel Cells
- Basque Hydrogen Corridor
- SHYNE (Spanish Hydrogen Network):
- Net-Zero MAR Alliance
- H2Basque

## C12.2

**(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

No, but we plan to introduce climate-related requirements within the next two years

## C12.3

**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?**

Row 1

**External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

**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)**

TUBA-SPA-001-OFF-Certificate.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**

Tubacex participates in several associations that could influence environmental regulations at national and international levels.

- European Steel Tube Association (ESTA)
- The Cluster Association of the Steel Industry (SIDEREX)
- The Spanish Association of Fluid Handling Equipment Exporters (FLUIDEX)
- International Umbilical Manufacturer's Federation (UMF)
- Innobasque

- Basque Energy Cluster
- API (American Petroleum Institute)
- The Steel Manufacturers Association (UNESID)
- International Energy Forum IEF
- International Gas Union IGU
- Stainless Steel Tube Trade Advancement Committee SSTTAC
- Spanish-Norwegian Chamber of Commerce

## 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  
UNESID

**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 do not know 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**

UNESID incorporated Spanish steel manufacturers position.

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

**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

1

 Tubacex 2022-Sustainability-Report eng.pdf

### Page/Section reference

All the document

### Content elements

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics  
Other, please specify  
People & Talent

### Comment

In this report, corresponding to the year 2022, TUBACEX sets out the company's ESG strategy (Environmental, Social, Governance) commitment to the three major challenges of sustainable development: economic, social and environmental sustainability, based on different pillars:

- Digitalization
- Care for the environment
- Respect for the local community
- Circular economy
- Promoting talent
- Innovation
- Human rights

## 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	<p>Other, please specify</p> <p>TUBACEX has collaborated in 2022 with the following associations and work forums:</p>	<ul style="list-style-type: none"> <li>• European Steel Tube Association (ESTA)</li> <li>• The Cluster Association of the Steel Industry (SIDEREX)</li> <li>• The Spanish Association of Fluid Handling Equipment Exporters (FLUIDEX)</li> <li>• International Umbilical Manufacturer’s Federation (UMF)</li> <li>• Innobasque</li> <li>• Basque Energy Cluster</li> <li>• API (American Petroleum Institute)</li> <li>• The Steel Manufacturers Association (UNESID)</li> <li>• International Energy Forum IEF</li> <li>• International Gas Union IGU</li> <li>• Stainless Steel Tube Trade Advancement Committee SSTTAC</li> <li>• Asociación de Emisores Españoles</li> <li>• SEA Empresas Alavesas</li> <li>• NACE</li> <li>• H2IT- Italian Association of Hydrogen and Fuel Cells</li> <li>• Spanish-Norwegian Chamber of Commerce</li> <li>• Institute of Internal Auditors</li> <li>• Basque Business Circle</li> <li>• APD</li> <li>• AERCE</li> <li>• AMODIL</li> <li>• Basque Hydrogen Corridor</li> <li>• SHYNE (Spanish Hydrogen Network):</li> <li>• Net-Zero MAR Alliance</li> <li>• H2Basque</li> </ul> <p>TUBACEX promotes the fight against climate change and shares information of interest on the GHG emissions reduction and offsetting, technological innovation, etc.</p>

## 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
--

Row 1	No, but we plan to have both within the next two years
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## 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	
Row 1	No, but we plan to do so within the next 2 years

## 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

### Dependencies on biodiversity

**Indicate whether your organization undertakes this type of assessment**

No, but we plan to within the next two years

## C15.4

**(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?**

No

## C15.5

**(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years

## C15.6

**(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?**

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Other, please specify Report type

## 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 other regulatory filings	Risks and opportunities Biodiversity strategy	

## 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.**

N/A

### 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	Sustainability Director	Director on board

## SC. Supply chain module

### SC0.0

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

N/A

## SC0.1

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

	Annual Revenue
Row 1	714,700,000

## SC1.1

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

### Requesting member

Baker Hughes Company

### Scope of emissions

Scope 1

### Scope 2 accounting method

### Scope 3 category(ies)

### Allocation level

Company wide

### Allocation level detail

### Emissions in metric tonnes of CO<sub>2</sub>e

1.632

### Uncertainty (±%)

5

### Major sources of emissions

Fossil fuel combustion, mainly natural gas

### Verified

No

### Allocation method

Allocation based on mass of products purchased

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

21,274

### Unit for market value or quantity of goods/services supplied

Currency

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

The source for calculation is the revenue of Tubacex for the specific customer in the reporting year. Using the revenue as a proxy, to estimate the gross value added (GVA) of the products/services provided to the customer, we multiply this value with our calculated emission intensity in terms of ton of CO<sub>2</sub> equivalent per thousand euros of GVA. The method applies the average intensity of the group, not any specific business unit. For 2023 we plan to have a refined method, based on actual GVA of the customer and the business unit providing the service.

By 2024, TUBACEX plans to get a refined method in place, based on actual emissions of the customer and the business unit providing the service taking advantage of the emissions tool developed by TUBACEX and that allows to know the carbon footprint at product level (cradle to gate).

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**Requesting member**

Baker Hughes Company

**Scope of emissions**

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

**Allocation level**

Company wide

**Allocation level detail**

**Emissions in metric tonnes of CO<sub>2</sub>e**

0.487

**Uncertainty (±%)**

5

**Major sources of emissions**

Processing of sold products

**Verified**

No

**Allocation method**

Allocation based on mass of products purchased

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

21,274

**Unit for market value or quantity of goods/services supplied**

Currency

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

The source for calculation is the revenue of Tubacex for the specific customer in the reporting year. Using the revenue as a proxy, to estimate the gross value added (GVA) of the products/services provided to the customer, we multiply this value with our calculated emission intensity in terms of ton of CO<sub>2</sub> equivalent per thousand euros of GVA. The method applies the average intensity of the group, not any specific business unit. For 2023 we plan to have a refined method, based on actual GVA of the customer and the business unit providing the service.

By 2024, TUBACEX plans to get a refined method in place, based on actual emissions of the customer and the business unit providing the service taking advantage of the emissions tool developed by TUBACEX and that allows to know the carbon footprint at product level (cradle to gate).

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**Requesting member**

Baker Hughes Company

**Scope of emissions**

Scope 3

**Scope 2 accounting method****Scope 3 category(ies)**

Category 1: Purchased goods and services

**Allocation level**

Company wide

**Allocation level detail****Emissions in metric tonnes of CO<sub>2</sub>e**

7,871

**Uncertainty (±%)**

5

**Major sources of emissions**

Purchased goods and services

**Verified**

No

**Allocation method**

Allocation based on the market value of products purchased

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

21,274

**Unit for market value or quantity of goods/services supplied**

Currency

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

The source for calculation is the revenue of Tubacex for the specific customer in the reporting year. Using the revenue as a proxy, to estimate the gross value added (GVA) of the products/services provided to the customer, we multiply this value with our calculated emission intensity in terms of ton of CO<sub>2</sub> equivalent per thousand euros of GVA. The method applies the average intensity of the group, not any specific business unit. For 2023 we plan to have a refined method, based on actual GVA of the customer and the business unit providing the service.

By 2024, TUBACEX plans to get a refined method in place, based on actual emissions of the customer and the business unit providing the service taking advantage of the emissions tool developed by TUBACEX and that allows to know the carbon footprint at product level (cradle to gate).

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**Requesting member**

Petróleo Brasileiro SA - Petrobras

**Scope of emissions**

Scope 1

**Scope 2 accounting method****Scope 3 category(ies)****Allocation level**

Company wide

**Allocation level detail****Emissions in metric tonnes of CO<sub>2</sub>e**

3,464

**Uncertainty ( $\pm\%$ )**

5

**Major sources of emissions**

Fossil fuel combustion, mainly natural gas

**Verified**

No

**Allocation method**

Allocation based on the market value of products purchased

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

45,172,363

**Unit for market value or quantity of goods/services supplied**

Currency

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

The source for calculation is the revenue of Tubacex for the specific customer in the reporting year. Using the revenue as a proxy, to estimate the gross value added (GVA) of the products/services provided to the customer, we multiply this value with our calculated emission intensity in terms of ton of CO<sub>2</sub> equivalent per thousand euros of GVA. The method applies the average intensity of the group, not any specific business unit. For 2023 we plan to have a refined method, based on actual GVA of the customer and the business unit providing the service.

By 2024, TUBACEX plans to get a refined method in place, based on actual emissions of the customer and the business unit providing the service taking advantage of the emissions tool developed by TUBACEX and that allows to know the carbon footprint at product level (cradle to gate).

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**Requesting member**

Petróleo Brasileiro SA - Petrobras

**Scope of emissions**

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

**Allocation level**

Company wide



**Allocation level detail****Emissions in metric tonnes of CO<sub>2</sub>e**

1,034

**Uncertainty (±%)**

5

**Major sources of emissions**

Electrical power consumption

**Verified**

No

**Allocation method**

Allocation based on the market value of products purchased

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

45,172,363

**Unit for market value or quantity of goods/services supplied**

Currency

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

The source for calculation is the revenue of Tubacex for the specific customer in the reporting year. Using the revenue as a proxy, to estimate the gross value added (GVA) of the products/services provided to the customer, we multiply this value with our calculated emission intensity in terms of ton of CO<sub>2</sub> equivalent per thousand euros of GVA. The method applies the average intensity of the group, not any specific business unit. For 2023 we plan to have a refined method, based on actual GVA of the customer and the business unit providing the service.

By 2024, TUBACEX plans to get a refined method in place, based on actual emissions of the customer and the business unit providing the service taking advantage of the emissions tool developed by TUBACEX and that allows to know the carbon footprint at product level (cradle to gate).

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**Requesting member**

Petróleo Brasileiro SA - Petrobras

**Scope of emissions**

Scope 3

**Scope 2 accounting method**

**Scope 3 category(ies)**

Category 1: Purchased goods and services

**Allocation level**

Company wide

**Allocation level detail****Emissions in metric tonnes of CO<sub>2</sub>e**

16,712

**Uncertainty (±%)**

5

**Major sources of emissions**

Purchased goods and services

**Verified**

No

**Allocation method**

Allocation based on the market value of products purchased

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

45,172,363

**Unit for market value or quantity of goods/services supplied**

Currency

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

The source for calculation is the revenue of Tubacex for the specific customer in the reporting year. Using the revenue as a proxy, to estimate the gross value added (GVA) of the products/services provided to the customer, we multiply this value with our calculated emission intensity in terms of ton of CO<sub>2</sub> equivalent per thousand euros of GVA. The method applies the average intensity of the group, not any specific business unit. For 2023 we plan to have a refined method, based on actual GVA of the customer and the business unit providing the service.

By 2024, TUBACEX plans to get a refined method in place, based on actual emissions of the customer and the business unit providing the service taking advantage of the emissions tool developed by TUBACEX and that allows to know the carbon footprint at product level (cradle to gate).

**SC1.2**

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

The calculation of emissions that apply each of the customers is based on the figures of emissions and activity that have been reported in the non financial information report of 2022 and in this CDP questionnaire

### SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	The variety of customers, a long operational footprint and grouped energy meters in our factories, difficult the task of separating the energy consumption and therefore the emissions of each customer order.

### SC1.4

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

Yes

#### SC1.4a

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

Deploying the EMS system will help us allocate with higher certainty the energy consumption and therefore scope 1 and 2 emissions to each of the production orders that from the beginning are assigned to an specific customer and purchase order.

### SC2.1

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

### SC2.2

**(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?**

No

### SC4.1

**(SC4.1) Are you providing product level data for your organization’s goods or services?**

No, I am not providing data

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

**Please confirm below**

I have read and accept the applicable Terms