

C0. Introduction

C0.1

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

Emerson (NYSE: EMR), headquartered in St. Louis, Missouri (USA), is a global leader that designs and manufactures products and delivers services that bring technology and engineering together to provide innovative solutions for customers in a wide range of industrial, commercial and consumer markets around the world. Our purpose is to drive innovation that makes the world healthier, safer, smarter, and more sustainable.

As part of our longstanding commitment to operational execution and excellence, we remain dedicated to doing our part as a global business leader to drive tangible, sustainable business practices and to help our customers around the world do the same.

We play a pivotal role in the global effort to activate sustainable business practices and manage resources efficiently. In addition to our internal sustainability efforts, Emerson technologies and expertise are helping customers achieve sustainability targets, fulfil environmental regulations, and implement responsible solutions. Our Causes and Values shape, define, and fuel Emerson's culture – they embody our aspirations and serve as the foundation of our character and behavior. Most importantly, they give meaning to our daily work, inspiring us to leave the world in a better place than we found it. Details on our causes (planet, humanity, champion, inclusion and future) and our values (Integrity, safety & quality, support our people, customer focus, continuous improvement, collaboration and innovation) can be found in our current ESG report.

Emerson's responses to this questionnaire contain forward-looking statements that are not strictly historical and may involve risks and uncertainties. Emerson undertakes no obligation to update any such statements to reflect later developments. These risks and uncertainties include economic and currency conditions, market demand, pricing, protection of intellectual property, and competitive and technological factors, among others, as set forth in Emerson's most recent Annual Report on Form 10-K and subsequent reports filed with the U.S. Securities & Exchange Commission (SEC).

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	October 1, 2020	September 30, 2021	Yes	3 years

C0.3

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

Algeria
Argentina
Australia
Austria
Azerbaijan
Bahrain
Belarus
Belgium
Brazil
Bulgaria
Canada
Chile
China
Colombia
Costa Rica
Croatia
Czechia
Denmark
Egypt
Finland
France
Germany
Greece
Hungary
India
Indonesia
Iraq
Ireland
Israel
Italy
Japan
Kazakhstan
Kuwait
Libya
Lithuania
Malaysia
Mexico
Montenegro
Morocco
Netherlands
New Zealand
Nigeria
Norway

- Peru
- Philippines
- Poland
- Portugal
- Qatar
- Romania
- Russian Federation
- Saudi Arabia
- Serbia
- Singapore
- Slovakia
- South Africa
- Spain
- Sweden
- Switzerland
- Taiwan, China
- Thailand
- Tunisia
- Turkey
- Ukraine
- United Arab Emirates
- United Kingdom of Great Britain and Northern Ireland
- United States of America
- Viet Nam

C0.4

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

USD

C0.5

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

Operational control

C0.8

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

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	EMR

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Board-level committee	<p>The Corporate Governance and Nominating Committee is responsible for assisting the Board in the oversight of the company’s ESG (environmental social governance) initiatives, which includes the Environmental Sustainability Steering Committee and covers climate change matters. The Company’s Chief Operating Officer also engages directly with the Board on a quarterly basis to report status and progress of the company’s GHG target. Performance against these targets is monitored by our Chief Sustainability Officer.</p> <p>Emerson recently amended the Corporate Governance and Nominating Committee charter to emphasize its role in overseeing important public policy and corporate social responsibility issues, including health, safety and environmental sustainability policies and reporting as well as providing oversight of the ESG report.</p> <p>Emerson’s Environmental Sustainability Steering Committee, formed in 2020, is driving actions to enhance Emerson’s environmental initiatives and encourage best practices throughout the organization. In this spirit, the committee continued to develop working groups in 2021 to enhance the company’s global value chain, including efforts focused on Emerson’s supply chain and energy sourcing.</p> <p>The Chief Sustainability Officer with approval from the corporate governance and nominating committee made the decision to set an ambitious target to achieve net zero greenhouse gas (GHG) emissions across our value chain by 2045 compared to a 2021 baseline. To set us on the right pathway, we will target net zero operations and a 25% reduction of our value chain emissions by 2030, also compared to a 2021 baseline.</p>

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 – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Emerson identifies climate-related issues and incorporates climate awareness in our business strategy given our portfolio helps a broad set of industries enhance their sustainability performance. The board reviews topics and meets 8 times per year to review sustainability issues and provide guidance on strategy. The company measures and tracks its performance on a quarterly basis and reports to the Executive VP & COO who reports to the entire Board of Directors . The Chief Sustainability Officer attends all board meetings and formally presents to the Board of Directors twice a year on Emerson’s environmental sustainability strategy and key initiatives.

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	Our board members have significant c-suite executive level experience from a broad set of industries and offer constructive perspectives in Emerson’s environmental sustainability strategies. Industry experience includes aerospace, energy, life sciences, transportation, telecommunications, legal and regulatory compliance, and financial accounting and disclosure.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Half-yearly

C1.2a

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

Emerson is committed to developing and maintaining sustainable, responsible manufacturing practices in its global operations. As part of our business strategy, our product development process, takes into consideration the potential implications of climate change.

CSO

The Chief Sustainability Officer is responsible for leading our global environmental sustainability strategy as we drive progress within our facilities and help our customers achieve their ESG objectives. The CSO also drives external engagements with policymakers, universities, customers, and other stakeholders to further our contribution to sustainability initiatives. The CSO oversees the Environmental Sustainability Steering Committee. The CSO monitors and leads all sustainability activities that are evaluated by the sustainability committee. The CSO meets with the board on a quarterly basis to discuss sustainability initiatives and review progress towards GHG reduction goals.

Environmental Sustainability Steering Committee

The Environmental Sustainability Steering Committee is a decision-making body with the mission of centrally aligning and coordinating environmental sustainability-related activities and initiatives across Emerson. The Committee's role is to recommend strategies and actions that help advance Emerson's standing on environmental sustainability, as well as to educate and encourage the use of best practices throughout Emerson. The Committee comprises Emerson's executive leadership and management teams covering all functions, including legal, finance, operations, supply chain, marketing, investor relations, business development and strategy planning. The Committee meets quarterly to monitor and discuss sustainability activities that align with our corporate strategy and goal and determines actions and initiatives.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Emerson's Executive compensation system includes a metric tied to our externally announced GHG reduction target. These metrics are judged annually and affect annual bonus compensation calculations.

C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Corporate executive team	Monetary reward	Emissions reduction target	As part of a good approach to corporate governance, our board chair is independent and not an executive of the company. Emerson's Executive compensation system includes a metric tied to our externally announced GHG reduction target. These metrics are judged annually and affect annual bonus compensation calculations.

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	2	Emerson considers short-term risks to be those occurring in the next two years.

Medium-term	2	5	Emerson considers medium-term risks to be those occurring between 2 and 5 years.
Long-term	5	20	Emerson considers long-term risks to be those occurring between 5 and 20 years.

C2.1b

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

When identifying or assessing climate related risks, Emerson defines substantive financial or strategic impact as a negative change in the company's business or operations that would include loss of sales, profits, and monetary damages (penalties and fines).

Emerson considers multiple factors in evaluating climate-related risk. Within internal climate-related scenario modelling, those risks and opportunities estimated to have the greatest impact on operating profit were included in Emerson's quantitative model. This generally represented risks/opportunities estimated to have a present value impact on operating profit of greater than \$50M in damages (either due to direct losses or lost revenue). In general, something that has a "substantive financial or strategic impact on the company's business" is not necessarily "material" to investors as defined by the SEC.

C2.2

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

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Our risk management process is assessed more than once a year and includes our short, medium and long-term time horizons.

With multiple business units and global operations, we face many different types of risks in our direct operations, upstream, and downstream, including business/ operational risks, industry and general operation risks and legal and regulatory risks as defined in our 2021 form 10-K and in subsequent reports we file with the SEC. The Board has responsibility for the oversight of Emerson's risk management process. This process is designed to provide to the Board timely visibility into the identification, reporting, assessment, and management of critical risks. Critical risks are those risks that meet the substantive financial impact criteria. Climate change risk is assessed as part of the company-wide process. The Audit Committee has specific responsibility for assisting the Board in risk management, including major financial risk exposures and the steps management has taken to monitor, mitigate and control such exposures, as well as an annual review of the company's environmental activities, audits and expenditures.

The Corporate Governance and Nominating Committee is responsible for assisting the Board in the oversight of the company's conflict of interest policies, codes of ethics, ESG, political activities and compliance with laws and regulations, including oversight of the company's political spending activities. The formal annual risk assessment process includes surveys of all business unit presidents and interviews with all business leaders, corporate functional leaders, and members of the Office of the Chief Executive. In addition, the employee responsible for mitigating the risk and the mitigation plan and timeline helps ensure relevant findings are documented. The full Board, or the appropriate committee, receives this risk assessment information annually to enable it to understand and monitor Emerson's risk management process. Information brought to the attention of the committees is shared with the full Board as appropriate. Ongoing risk assessments in various areas are also conducted as part of Emerson's normal management process, and the results of those assessments are shared with the Board or relevant committee as needed throughout the year. This could include potential issues such as ethics or human rights violations, environmental risks, etc.

Case Study Transitional: In 2022, Emerson undertook a climate risk and opportunity assessment to identify those risks and opportunities, as identified by the TCFD, that are most material to Emerson's business. For each TCFD risk and opportunity, Emerson identified one (or more) Emerson-specific inherent risk(s)/opportunity(ies) and associated impact(s) across each of the company's business units. Emerson categorized these risks in alignment with its internal Enterprise Risk Management Framework and identified the time horizon in which the most material impact of the risk would manifest. Based on this risk and opportunity assessment, Emerson identified the most material risks and opportunities and, where feasible, quantified potential impacts

through the use of long-term analysis (see section 2.4) across a low and a high emissions scenario. An example of a key transition risk identified was increased stakeholder concern or negative feedback. Emerson identified that a potential shift in investor and consumer sentiment could increase the focus on its perceived impact on the climate. This could lead to reduced revenue or increased litigation. Additionally, failure to achieve existing net zero targets or other regulatory expectations could lead to increased capital costs due to reputational damage. One example of a key transition opportunity is a shift in consumer preferences towards lower emissions technologies. Emerson believes it is well-positioned to capitalize on the macro trends of energy efficiency and decarbonization given growing public awareness and increased regulations. Specifically in Commercial and Residential solutions, this opportunity can manifest itself through greater demand for heat pumps and lower GWP refrigerants. For our Automation Solutions business, a significant reputational benefit could be achieved by shifting its customer portfolio to focus more on serving customers in the renewable and nuclear end markets. Such a shift in the customer base could also mitigate potential future reputational risk.

Case Study Physical: Potential disruptions in the company's supply chain present both upstream and downstream risks. Because the company's supply chain influences its overall environmental impact, Emerson has also started to identify opportunities for improvement among its energy providers' supply chain partners and logistics services to better understand and identify risks. Supply chain disruptions present a physical risk, in that the increase in natural disasters (extreme precipitation, hurricanes, etc.) could impact its business continuity through impacts in the supply chain.

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	Current regulations are always included in our risk assessment because we have manufacturing facilities in multiple jurisdictions that are subject to different climate-related regulations, and we closely monitor their relevance to our operations. For example, our manufacturing facilities are subject to environmental compliance audits. We comply with applicable environmental laws, regulations and permits and budget on an ongoing basis for operating and capital costs associated with this environmental compliance. If additional or more stringent requirements are imposed on our manufacturing operations, we could incur additional operating costs.

Emerging regulation	Relevant, always included	<p>Emerging regulations are always included in our risk assessment because we have manufacturing facilities in multiple jurisdictions that are subject to different climate-related regulations and we closely monitor their relevance to our operations.</p> <p>For example, in advance of evolving regulations facing customers in the commercial air conditioning industry, Emerson recently introduced a new line of Copeland™ scroll compressors specifically designed for lower GWP refrigerants and increased energy efficiencies. The flexible product platform also provides infrastructure upon which future sustainability improvements can be expanded – all without compromising ease of system installation or servicing.</p> <p>In another example, the manufacturing and sale of products in specific states or countries may adhere us to environmental laws and regulatory compliance. These would include water and air pollutants, hazardous waste disposal, and the disposal of electronic waste. (Environmental compliance)</p>
Technology	Relevant, always included	<p>Emerging technologies are always included in our risk assessment. We face the risk of not meeting customer expectations for product efficiency. Emerson is managing this by investing in new technologies to reduce energy and related costs. Our failure to successfully respond to technology risks and uncertainties might damage our reputation and prevent us from reducing operating costs through energy efficiency measures</p> <p>Product efficiency regulations: Emerson monitors potential product efficiency regulations and standards that can improve our products. For example, we are beginning to conduct ISO-Conformant LCAs across our product portfolio, to identify opportunities to reduce the energy needs of each product, particularly in the customer use phase.</p>
Legal	Relevant, always included	<p>We are subject to litigation and environmental regulations that could adversely affect our operating results. We are subject to environmental protection laws and could incur substantial costs. For example, during acquisitions we sometimes take on or keep environmental liabilities. The regulatory requirements with the liabilities are considered a risk because of the associated cost to manage the long-term liabilities.</p>
Market	Relevant, always included	<p>Our businesses operate in markets that are highly competitive and potentially volatile, and we compete based on product performance, quality, service and/or price across the industry and markets we serve. For example: Competitive pressures could adversely affect prices or</p>

		customer demand for our products, impacting sales or profit margins, and/or resulting in a loss of market share
Reputation	Relevant, always included	Reputation can be a risk if Environmental sustainability is a critical issue for individuals and businesses alike, and we are committed to advancing strategies and technologies to lower emissions and improves resource efficiency throughout our company and with our customers. For example: A positive perception of a company can be a strategic advantage whereas a negative perception can be a disadvantage. Therefore, Emerson’s reputation as a sustainable company is important as more customers and investors are prioritizing advancements in sustainability initiatives. Emerson technologies and expertise are important to their enhancing sustainability performance.
Acute physical	Relevant, always included	Our operations depend on production facilities throughout the world. For example: significant weather-related event such as a hurricane or flooding, could have a significant impact on production and supply chain.
Chronic physical	Relevant, always included	Long-term climate related activities such as prolonged higher than average temperatures. For example, drought and water shortage would be an issue in production facilities and in our supply chain. This could also increase electricity cost in our factories world-wide.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Wildfire

Primary potential financial impact

Increased direct costs

Company-specific description

With operations around the globe, Emerson has manufacturing sites spread across various regions, with different exposure to extreme events. Reynosa, Mexico was ranked highest and was selected for detailed risk modeling due to its meaningful exposure to wildfires and concentration of three Commercial & Residential manufacturing sites that employ a combined 5,677 employees. The total insurable value of these three properties is estimated to be \$1.4B, which includes the building cost, machinery, equipment and contents, average stock, and the estimated cost of a yearly business interruption. The peril exposure, high employee count, and large insurable value of these assets all contribute to the risk to Emerson's assets in Reynosa, Mexico.

The potential impact of wildfires on Emerson's business in Reynosa was calculated through the following steps: first, a determination of the frequency and severity of wildfires for Emerson's assets for both current and future climatic conditions; followed by a calculation of the financial risk based on the assets' specific locations, characteristics, and exposure profiles. These steps, and their corresponding results, are elaborated in detail below.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Low

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)

46,900,000

Potential financial impact figure – maximum (currency)

48,000,000

Explanation of financial impact figure

Emerson models the current wildfire risk based on land use type, historical burned area, and historical wildfire frequency. Future wildfire risk incorporates climate variables derived from downscaled Global Circulation Models included in CMIP6. Specifically, changes in temperature, wind speed, and consecutive dry days under a high emissions scenario (SSP5-8.5) and a low emissions scenario (SSP1-2.6) are used to adjust the current wildfire risk. After reviewing physical risk exposure for 200+ major sites around the world, Reynosa Mexico scored highest for potential financial impact due to its above average wildfire risk and concentration of business activity.

A financial impact value was calculated based on the potential exposure, defined as the expected frequency and severity of a wildfire, derived from historical wildfire occurrence, land use, and future climatic conditions (outlined above), combined with the value of the buildings, their contents, stock, and the cost of a business interruption. Using the modeled frequency and severity, assets are assigned probabilistic exposure to three fire-exposure states and corresponding levels of damage: a) Zone 1: within 100 meters of the burn area, resulting in 10% damage due to heat, ember, smoke, and ash, b) Zone 2: the subsequent 400 meter radius outside of Zone 1, resulting in 2% damage, and c) anything further than 500 meters, which is unaffected. A possible fourth case - 100% asset damage within the direct burn area - was excluded because this outcome would not be expected given the specific surroundings of the three assets studied.

The damage percentages for each zone, combined with the expected frequency over a 40 year period of an asset's placement within those zones, provides estimates of the 40 year cumulative building damage, content damage, and business interruption due to wildfire. Based on these calculations, the financial impact of wildfire for the three Emerson assets in Reynosa, Mexico are as follows. Under the low emissions scenario, wildfire would lead to a cumulative 40 year total of approximately \$17.9M in building damage, \$22.9M in content damage, and \$6.1M in business interruption cost, for a total of \$46.9M of damages (~3.3% of total value). Under the high emissions scenario, wildfire would lead to approximately \$18.3M in building damage, \$23.5M in content damage, and \$6.2M in business interruption cost, for a total of \$48.0M of damages (~3.4% of total value) over a 40 year period.

Cost of response to risk

0

Description of response and explanation of cost calculation

Emerson models each location's current wildfire risk based on land use type, historical burned area, and historical wildfire frequency. Future wildfire risk incorporates climate variables derived from downscaled Global Circulation Models included in CMIP6. Specifically, changes in temperature, wind speed, and consecutive dry days under a high emissions scenario (SSP5-8.5) and a low emissions scenario (SSP1-2.6) are used to adjust the current wildfire risk. After reviewing physical risk exposure for 200+ major sites around the world, Reynosa Mexico scored highest for potential financial impact due to its above average wildfire risk and concentration of business activity. Through the use of modeling and simulation techniques, the evaluated risk in Reynosa is \$46.9M due to potential asset impairment and associated business interruption

Emerson has processes in place to respond to physical risks, including wildfires. This eliminates all additional cost associated with this risk. The risk of wildfires or any extreme weather condition is assessed in Emerson's risk management process and also locally together with our security teams. Emerson has well developed emergency response programs to manage these types of risks. This includes facility and workplace emergency preparedness plans and Business Continuity Plans. Our insurer, FM Global has developed an algorithm that contemplates natural hazards, operational risks, and

construction risks. From there, FM inspects most of Emerson's locations for loss control purposes and provides recommendations that can reduce the likelihood of loss or mitigate the overall loss expectancy at a facility. Cost associated with premiums and capital expenditures (based on FM's recommendations) are incorporated into the businesses annual budgets and therefore don't present additional cost.

Case study: In 2021, Emerson's performed a detailed wildfire risk modelling at our Reynosa Mexico facilities. As explained above, the cost to manage this risk is included in the insurance premiums and capital expenditures and absorbed into business-as-usual activities. Our cost is therefore calculated as 0.

Comment

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Other, please specify

Other: Ability to capture energy efficiency & emissions reduction investments at traditionally served customer segments and successfully capture high growth renewable/nuclear energy, biofuels, and biochemical related markets

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Expected shifts in energy demand by fuel source over the next 20 years will impact Emerson's served market size and participation.

The SDS, in limiting temperature rise to well below 2 degrees Celsius by 2100, requires rapid increases in renewable infrastructure investments, a phase out of unabated fossil fuels, and an increase in renewable energy supply. Emerson's capabilities in automation, efficiency, and clean energy represent a growth opportunity through both the market growth in renewable energy-based end markets and the capital expenditures (CapEx) in renewable energy infrastructure.

With increases in renewable demand, Emerson's end markets tied to those fuel sources, particularly Power & Renewables will increase in size. In addition, realizing the necessary gains in renewable energy under SDS requires significant capital investment in infrastructure to support the production, storage, and transmission of renewable energy. The increases in infrastructure spending needed in SDS represent additional growth opportunities for Emerson above those captured by renewable energy demand increases

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

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

No, we do not have this figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

We are not disclosing quantitative data for our opportunity this year as we are refining the data needed. In the future, Emerson's ambition is to include certain opportunities

and their quantitative impact as data quality improves

Comment

C3. Business Strategy

C3.1

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

Row 1

Transition plan

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

Publicly available transition plan

Yes

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

We have a different feedback mechanism in place

Description of feedback mechanism

The transition plan is discussed and reviewed at Board meetings and quarterly sustainability steering committee meetings.

Frequency of feedback collection

More frequently than annually

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

 emerson-2021-environmental-social-governance-report-en-us-8186672.pdf

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 SDS	Company-wide		<p>The analysis covers the entire Emerson organization. Two emissions pathways were considered in the analysis, the low emissions pathway is based on IEA Sustainable Development Scenario for transition risk and RCP 2.6 for physical risk. The high emissions pathway is based on IEA STEPS for transition risk and RCP 8.5 for physical risk.</p> <p>Qualitative risks and opportunities were compared against the transition and physical risk scenarios to identify those risks and opportunities with the greatest likelihood of occurrence with the most significant financial impact across a short, medium, and long-time horizon.</p> <p>For transition risk/opportunity quantitative modeling, IEA projections related to energy consumption, energy supply, energy efficiency, and carbon pricing were applied to Emerson’s existing internal business and sustainability forecasts. The IEA projections included in the SDS/STEPS scenarios were further supplemented with other reputable industry publications. Emerson’s ultimate profitability was derived under both the low and high emissions pathways. Impacts on profitability were quantified across the 2022–2040-time horizon, also incorporating the impacts of inflation and discount.</p> <p>For physical risk/opportunity modeling, over 200 sites across the world were determined by Emerson to be the most critical to ongoing operations. These sites were modeled using the consultancy’s proprietary physical risk model which is based on historical and reanalysis data at an individual weather station level combined with climate projections using CMIP6/ISIMIP framework. These risk scores were then translated to a financial impacts for the low and high emissions scenarios.</p>
Transition scenarios IEA STEPS	Company-wide		<p>The analysis covers the entire Emerson organization. Two emissions pathways were considered in the analysis, the low emissions pathway is based on IEA</p>

(previously IEA NPS)			<p>Sustainable Development Scenario for transition risk and RCP 2.6 for physical risk. The high emissions pathway is based on IEA STEPS for transition risk and RCP 8.5 for physical risk.</p> <p>Qualitative risks and opportunities were compared against the transition and physical risk scenarios to identify those risks and opportunities with the greatest likelihood of occurrence with the most significant financial impact across a short, medium, and long-time horizon.</p> <p>For transition risk/opportunity quantitative modeling, IEA projections related to energy consumption, energy supply, energy efficiency, and carbon pricing were applied to Emerson’s existing internal business and sustainability forecasts. The IEA projections included in the SDS/STEPS scenarios were further supplemented with other reputable industry publications. Emerson’s ultimate profitability was derived under both the low and high emissions pathways. Impacts on profitability were quantified across the 2022–2040-time horizon, also incorporating the impacts of inflation and discount.</p> <p>For physical risk/opportunity modeling, over 200 sites across the world were determined by Emerson to be the most critical to ongoing operations. These sites were modeled using the consultancy’s proprietary physical risk model which is based on historical and reanalysis data at an individual weather station level combined with climate projections using CMIP6/ISIMIP framework. These risk scores were then translated to a financial impacts for the low and high emissions scenarios.</p>
Physical climate scenarios RCP 2.6	Business division		<p>The analysis covers the entire Emerson organization. Two emissions pathways were considered in the analysis, the low emissions pathway is based on IEA Sustainable Development Scenario for transition risk and RCP 2.6 for physical risk. The high emissions pathway is based on IEA STEPS for transition risk and RCP 8.5 for physical risk.</p> <p>Qualitative risks and opportunities were compared against the transition and physical risk scenarios to identify those risks and opportunities with the greatest</p>

			<p>likelihood of occurrence with the most significant financial impact across a short, medium, and long-time horizon.</p> <p>For transition risk/opportunity quantitative modeling, IEA projections related to energy consumption, energy supply, energy efficiency, and carbon pricing were applied to Emerson’s existing internal business and sustainability forecasts. The IEA projections included in the SDS/STEPS scenarios were further supplemented with other reputable industry publications. Emerson’s ultimate profitability was derived under both the low and high emissions pathways. Impacts on profitability were quantified across the 2022–2040-time horizon, also incorporating the impacts of inflation and discount.</p> <p>For physical risk/opportunity modeling, over 200 sites across the world were determined by Emerson to be the most critical to ongoing operations. These sites were modeled using the consultancy’s proprietary physical risk model which is based on historical and reanalysis data at an individual weather station level combined with climate projections using CMIP6/ISIMIP framework. These risk scores were then translated to a financial impacts for the low and high emissions scenarios.</p>
Physical climate scenarios RCP 8.5	Business division		<p>The analysis covers the entire Emerson organization. Two emissions pathways were considered in the analysis, the low emissions pathway is based on IEA Sustainable Development Scenario for transition risk and RCP 2.6 for physical risk. The high emissions pathway is based on IEA STEPS for transition risk and RCP 8.5 for physical risk.</p> <p>Qualitative risks and opportunities were compared against the transition and physical risk scenarios to identify those risks and opportunities with the greatest likelihood of occurrence with the most significant financial impact across a short, medium, and long-time horizon.</p> <p>For transition risk/opportunity quantitative modeling, IEA projections related to energy consumption, energy supply, energy efficiency, and carbon pricing were</p>

			<p>applied to Emerson’s existing internal business and sustainability forecasts. The IEA projections included in the SDS/STEPS scenarios were further supplemented with other reputable industry publications. Emerson’s ultimate profitability was derived under both the low and high emissions pathways. Impacts on profitability were quantified across the 2022–2040-time horizon, also incorporating the impacts of inflation and discount.</p> <p>For physical risk/opportunity modeling, over 200 sites across the world were determined by Emerson to be the most critical to ongoing operations. These sites were modeled using the consultancy’s proprietary physical risk model which is based on historical and reanalysis data at an individual weather station level combined with climate projections using CMIP6/ISIMIP framework. These risk scores were then translated to a financial impacts for the low and high emissions scenarios.</p>
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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) What are the most significant climate risks and opportunities facing Emerson from a transition risk standpoint?
- 2) What are the most significant climate risks facing Emerson from a physical risk standpoint?
- 3) How should Emerson adapt its business strategy depending on the emergence of a low/high emissions scenario?

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

1) Transition risk perspective: Stigmatization of the sector and increased stakeholder concern were identified as key risks within the Automation Solutions business. Emerson’s well-established digital automation focus in the Oil and Gas sectors could lead to talent acquisition and retention challenges as increased climate awareness impacts Emerson’s operational sectors. Further, this perceived reputation could lead to a shift in investor and consumer sentiment, increasing the focus on Emerson’s

perceived impacts on climate. This again could lead to talent acquisition issues, as well as reputation-based sales loss. This risk is partially mitigated through Emerson’s strategy to capitalize on growing our digital automation impact in green industries, as mentioned below.

Opportunity perspective: A shift in consumer preferences to green solutions could lead to a large sales. Emerson believes it is well-positioned to capitalize on the trends of energy efficiency and decarbonization given growing public awareness and increased regulations. Emerson can also capitalize on the expansion of low emission goods and services. Due to the horizontal nature of many of Emerson’s Automation Solution products, this can manifest itself in the form of more aggressively pivoting its current products beyond traditional hydrocarbon sectors towards more sustainable energy forms.

2) Physical risk standpoint: The region that faces the largest peril risk for Emerson’s business is Reynosa, Mexico due to its inherent risk to wildfires, its total employee count, and insurable asset value. With three manufacturing sites in the region, an individual wildfire can lead to business interruptions and significant building and contents damage. Reynosa and the surrounding area have been impacted by multiple wildfires in recent years. A fire in 2022 that was 100 miles north of Reynosa burned 60,000 acres in Mexico and another in 2011 that was 100 miles west burned 245,000 acres.

3) Transition risk/opportunity standpoint: The quantitative analysis (low emissions) identified market growth in AS end markets based on the energy demand transition forecasted by the IEA under the SDS. The Power & Renewables end market is expected to grow due to accelerated adoption of clean energy. Resulting investments in green infrastructure in the near term would further grow the market size. Opportunities were also identified in the efficient heating and cooling markets, where heat pumps were identified as a key opportunity moving forward. Quantitative analysis (high emissions) indicated that Emerson’s current customer base would remain stable, and revenue would remain on a consistent trajectory. Emerson already has a presence in fossil fuel-based markets such as Upstream Oil & Gas. In a high emissions scenario where energy demand is similar to the current baseline, Emerson’s status as a leader in efficient heating and cooling should hold regardless of global emissions trajectory.

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

<p>Products and services</p>	<p>Yes</p>	<p>Product Strategy: Our product strategy presents an opportunity for Emerson to help mitigate climate change. Our customers are prioritizing opportunities to enhance their environmental sustainability and reach Top Quartile performance, while reducing costs across their operations. Emerson is committed to delivering environmentally sustainable solutions and supporting our customers' decarbonization strategies by providing solutions that enable:</p> <ul style="list-style-type: none"> • An optimized production of alternative fuels like hydrogen and biofuels and low-carbon power sources like solar, wind, hydro and nuclear. • The improvement of ecosystem energy and material efficiency in production systems, commercial and residential buildings and throughout the cold chain • The management and removal of production emissions (e.g., through carbon capture utilization and the storage, monitoring and prevention of fugitive emissions). • The growing electrification of transportation and other end-uses, such as heat pumps, alongside the integration of the whole energy system such as improvements in grid management. <p>Our product strategy has been influenced by climate related risks and opportunities through acquisitions with sustainability in mind. Our time horizon for planning acquisitions is both short and medium-term (0-2 years and 2-5 years) Our 2020 investment strategy included the following acquisitions:</p> <ul style="list-style-type: none"> -Open Systems International, Inc. (OSI Inc.), strengthening our ability to help customers incorporate renewable energy sources and improve energy efficiency and reliability. Verdant, broadening our energy management and optimization capabilities for multifamily residential and commercial applications. - American Governor Company, building our technology capabilities and expertise in the renewable hydroelectric power industry. -Progea Group, expanding our robust embedded software and control portfolio for manufacturing, infrastructure and building automation applications. -7AC Technologies, Inc., growing our legacy heating, ventilation, and air conditioning capabilities to enable commercial building owners and retailers to achieve better energy efficiency and air quality.
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Supply chain and/or value chain	Yes	<p>Our Supplier Code of Conduct (SCoC) states that we expect suppliers to comply with principles regarding ethical behavior, labor practices, human rights, and environmental protections. Currently, over one third of the company’s supply chain spend is under contracts requiring acknowledgment of this clause. We require suppliers who want to participate in our e-sourcing initiatives to acknowledge their understanding and compliance with our Supplier Code of Conduct before they are allowed to bid. We also conduct site visits of select new and developing suppliers as part of our qualification process. Our strategy in this area is driven by climate related risks, which includes disruptions in both supplier continuity and risk due to physical treats. We can help mitigate this through contract and supplier management as well as regional sourcing. Our time horizon for this is short (1-3 years) and medium (3-5 years)</p> <p>Case Study:</p> <p>In 2021, we continued to implement our online contract management platform and supplier qualification module, enabling us to grow the percentage of spend under contract and helping to ensure suppliers’ acknowledgement of our SCoC. The supplier qualification module also provides a mechanism for open dialogue with our suppliers regarding environmental, social and governance information. To evaluate our suppliers’ awareness of and compliance with our Supplier Code of Conduc, as well as their own corporate social responsibility policies, we conduct regular surveys of our top 450+ suppliers. We have expanded the survey to include suppliers who account for 50% of our annual direct supplier spend. In 2021, Emerson’s plan to expand this engagement with its suppliers on key ESG topics.</p> <p>Case Study: Regional sourcing can reduce the risk of supplier disruption from global, physical threats. Emerson has a regionalization strategy where the company manufactures, sources and supplies within regional markets. This has led to increased speed, cost savings and cash flow generation, while supporting local customer needs and regulatory mandates in the countries in which Emerson operates. Regional sourcing reduces travel distance and emissions, specifically physical threats. Emerson’s strategy provides economic benefits for local suppliers and communities within</p>

		these world regions, as well as environmental benefits including reduced transportation and emissions.
Investment in R&D	Yes	<p>Climate-related issues are woven into our business objectives and strategies for our investment in R&D. Investment in R&D presents an opportunity for Emerson to enable efficiencies of future product development. For example, Emerson R&D is Accelerating the Move to Hydrogen. Global attention on hydrogen as an alternative fuel is increasing, and Emerson is positioned to impact the development of the hydrogen economy at scale. We would consider this a medium (2-5 years) and long (5-20 year) plan.</p> <p>Case Study: Our Automation Solutions portfolio provides products and solutions to hydrogen original equipment manufacturers in the U.K. We are supporting Haskel — a global manufacturer of turnkey hydrogen refueling stations — with their aim to build 6-10 refueling stations in one year. We are also working closely with CMB.TECH to help them develop marine vessels powered by hydrogen.</p>
Operations	Yes	<p>Emerson’s operation strategy incorporates short (1-3 years), medium (3-5 years) and long (5-20 years) time horizon climate related risks and opportunities in the company’s operations. In 2019, Emerson made a commitment to reduce the company’s GHG emissions by 20%, normalized to sales, across the company’s entire global manufacturing footprint and shared service facilities by 2028, measured by the company’s baseline year of 2018. We have since reduced our GHG intensity through 2021 by 17%.</p> <p>Emerson is implementing strategies and action plans to reduce the company’s GHG emissions worldwide. An energy management and GHG reduction playbook was distributed to all operations leaders across the company in 2020, helping ensure best practices in emissions reductions are implemented across the company’s manufacturing sites globally. Additionally, Emerson led virtual and in-person energy audits, when travel restrictions allowed, to identify site-level opportunities to reduce energy use and emissions.</p> <p>Case Study: Emerson identified opportunities to reduce energy use and emissions at the company’s Copeland Alliance facility in Natchitoches, Louisiana, by 4.6 million kWh and approximately 7% from a fiscal 2020 baseline, respectively. At the company’s Rosemount facility in</p>

		<p>Chanhassen, Minnesota, Emerson identified opportunities to reduce 1.1 million kWh in energy and approximately 8% from a fiscal 2020 baseline in emissions.</p>
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C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs	<p>The direct costs associated with the purchase of renewable electricity credits, offsets, and other neutralization mechanisms. We are typically paying 8-12% premiums for renewable electricity and other neutralization mechanisms to achieve net zero have influenced our financial planning. An important component to achieving net zero operations by 2030 relies on the implementation of high-quality neutralization activities. There are currently three approaches to neutralize carbon emissions: taking carbon out of the atmosphere and permanently storing it underground through technological solutions, storing carbon in some form of natural sink such as trees and soil, or recycling emitted carbon back into some form of permanent product use such as building materials.</p> <p>For corporate net zero targets to add up at scale, we support the principle that offsets should not replace mitigation efforts and should only be used to remove residual emissions that organizations cannot reduce. Companies should strive for neutralization activities that deliver permanent removals. We support the implementation of a global system in which carbon offsets comply with a consistent high level of quality and where requirements, such as additionality and permanence, are assured.</p>

C3.5

(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s transition to a 1.5°C world?

No, but we plan to in the next two years

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 1

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 3

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 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 7: Employee commuting

Category 9: Downstream transportation and distribution

Category 10: Processing of sold products

Category 11: Use of sold products

Category 12: End-of-life treatment of sold products

Category 15: Investments

Base year

2021

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

195,945

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

601,141

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

591,238,300

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

592,035,386

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

0.03

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

0.1

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

99.9

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

100

Target year

2030

Targeted reduction from base year (%)

25.1

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

443,434,504.114

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

195,945

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

601,141

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

591,238,300

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

592,035,386

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

0

Target status in reporting year

New

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

Emerson's SBT includes all scope 1, 2, and 3 emissions. There are no exclusions.

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

To achieve this ambitious goal, Emerson plans to further increase the efficiency of its products and solutions, specifically within our HVACR business, which accounts for a significant portion our use of sold product emissions. Additionally, Emerson intends to engage our suppliers to support them on their decarbonization journeys and educate our customers on best practices to efficiently operate our equipment.

Our strategy also includes engaging our suppliers by sharing best practices, identifying collective goals and encouraging our partners to pursue environmental sustainability activities. Ultimately, we will include sustainability metrics to be key factors in the sourcing decision-making process, and the learnings from our supplier sustainability outreach will guide this process.

Finally, Emerson expects that our Scope 3 emissions will decrease as efforts progress worldwide to continue to decarbonize the electricity grid, both from the public and private sectors. We expect our sold products will be increasingly powered by low-carbon power sources. Energy efficiency standards and regulations will continue to drive improvements in the energy consumption of appliances, equipment, and buildings. Emerson will continue to support and advocate for these types of policies and will keep engaging researchers and governments to develop breakthrough technologies in critical areas.

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)

C4.2a

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

Target reference number

Low 1

Year target was set

2021

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Base year

2021

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

48,519

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

4.5

Target year

2030

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

100

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

4.5

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

0

Target status in reporting year

New

Is this target part of an emissions target?

Yes. This target will have us make progress towards our Abs1 target

Is this target part of an overarching initiative?

RE100

Please explain target coverage and identify any exclusions

This target includes purchased electricity for all Emerson facilities. There are no exclusions

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

During 2021, Emerson established an Energy Sourcing Committee to act as a focal point for reviewing opportunities and engaging in more active sourcing of renewable electricity. This group has representatives from sustainability, supply chain, finance and legal functions and works closely with our businesses to evaluate and implement renewable energy purchases. We also utilize third-party energy specialists who are active in the energy markets and aware of emerging opportunities. With this enhanced focus, we sourced approximately 4% of global electricity from renewable sources in major facilities in 2021 and anticipate reaching approximately 25% in 2022. For our 2030 net zero operations objective, we are targeting 100% renewable electricity coverage from contracted electricity sources and on-site generation assets.

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

Abs1

Target year for achieving net zero

2045

Is this a science-based target?

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

Please explain target coverage and identify any exclusions

Emerson has established a target to reach net zero greenhouse gas (GHG) emissions across Scopes 1, 2 and 3 by 2045 compared to a 2021 baseline. There are no

exclusions. A robust net zero design requires the absolute reduction of GHG emissions by at least 90%, allowing for high-quality carbon neutralization in other parts of the ecosystem for any residual emissions, which cannot be otherwise abated. In the near term, we aim to reach net zero across our operations for Scope 1 and 2 GHG emissions by 2030, following the same SBTi Net-Zero Standard.

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

To set us on the right pathway to achieve our net zero goal in 2045, we will target net zero operations and a 25% reduction of our value chain emissions by 2030, also compared to a 2021 baseline. The invaluable lessons we learn from decarbonizing within our four walls will enable us to drive emission reductions where we can have the greatest impact for our customers, suppliers and partners.

An important component to achieving net zero operations by 2030 relies on the implementation of high-quality neutralization activities. There are currently three approaches to neutralize carbon emissions: taking carbon out of the atmosphere and permanently storing it underground through technological solutions, storing carbon in some form of natural sink such as trees and soil, or recycling emitted carbon back into some form of permanent product use such as building materials. For corporate net zero targets to add up at scale, we support the principle that offsets should not replace mitigation efforts and should only be used to remove residual emissions that organizations cannot reduce. Companies should strive for neutralization activities that deliver permanent removals. We support the implementation of a global system in which carbon offsets comply with a consistent high level of quality and where requirements, such as additionality and permanence, are assured.

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

Across our indirect value chain, Emerson is targeting a 25% absolute reduction of Scope 3 GHG emissions by 2030. This includes a breadth of activities from purchased materials and components, transportation and distribution, to the energy and associated emissions required to operate our products in customer and end-user locations. While Scope 3 emissions are outside of our direct control, Emerson is well-positioned to influence reductions of these emissions in many ways. We can enhance our own product designs, engage our supply chain partners and end-user customers in their own GHG reduction journeys, advocate with policymakers to continue driving the pace of greening of electrical grids and incentivize more active at-scale adoption of important energy transition solutions

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	94	21,247
Implementation commenced*	0	0
Implemented*	36	28,605
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Low-carbon energy consumption

Other, please specify

Mix of renewable energy including solar, wind, and hydro

Estimated annual CO2e savings (metric tonnes CO2e)

18,217

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)

0

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

73,000

Payback period

No payback

Estimated lifetime of the initiative

1-2 years

Comment

Emerson is part of RE100 and is increasing the amount of directly impactful renewable energy through supplier contracts and power purchase agreements. During 2021, Emerson established an Energy Sourcing Committee to act as a focal point for reviewing opportunities and engaging in more active sourcing of renewable electricity. This group has representatives from sustainability, supply chain, finance and legal functions and works closely with our businesses to evaluate and implement renewable energy purchases. We also utilize third-party energy specialists who are active in the energy markets and aware of emerging opportunities. With this enhanced focus, we sourced approximately 4% of global electricity from renewable sources in major facilities in 2021 and anticipate reaching approximately 25% in 2022.

Initiative category & Initiative type

Energy efficiency in buildings
Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

193

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

Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

167,111

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

253,030

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

In FY21, Emerson implemented voluntary lighting projects in 6 manufacturing locations as a part of its continuing energy efficiency treasure hunt initiative.

Initiative category & Initiative type

Energy efficiency in production processes
Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)

997

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)

330,095

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

306,225

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

In FY21, Emerson implemented voluntary compressor efficiency projects in 8 manufacturing locations as a part of its continuing energy efficiency treasure hunt initiative.

Initiative category & Initiative type

Energy efficiency in production processes
Other, please specify
Multiple initiatives including machine/equipment replacement, cooling technology, process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

9,198

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

Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

2,130,331

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

3,694,549

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

In FY21, Emerson implemented voluntary production process improvements projects in 21 manufacturing locations. This included equipment replacement, process and load optimization, auto sensors, and cooling tower optimization controls as a part of its continuing energy efficiency treasure hunt initiative.

C4.3c

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

Method	Comment
Dedicated budget for energy efficiency	Encouragement of facility energy audits
Employee engagement	Employees are aware of The Paris Agreement for future global temperature goals and are cognizant of GHG-reduction efforts by our current and future customers and plan for them on the business unit level.
Compliance with regulatory requirements/standards	Encouragement of facility energy audits
Internal incentives/recognition programs	Employees are monetarily recognized on progress towards our publicly reported targets

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

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

Type of product(s) or service(s)

Other

Other, please specify

Compressor with Low GWP refrigerant

Description of product(s) or service(s)

These new compressors and controls use refrigerants with 50% less global warming potential. Through automation technologies, for example, , Emerson's Copeland™ scroll compressors are specifically designed for lower-GWP refrigerants and increased energy efficiency, which benefit the commercial and residential air conditioning and refrigeration industry. Copeland CO2 refrigeration scroll compressors reduce GHG emissions by using CO2 instead of other refrigerants. Copeland variable speed scroll compressors increase efficiency in residential HVAC systems by matching the load with variable speed compression, enabling homeowners to save up to 40% on annual energy costs.

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

0.1

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

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

Type of product(s) or service(s)

Other

Other, please specify

Biomethane injection

Description of product(s) or service(s)

For years, regulations in the United States have provided financial incentives to capture pollutants like methane gas from landfills, livestock operations, wastewater treatment and other sources. Emerson's Vilter compressors and other equipment are used to do exactly that – they capture waste gas, clean it, dehydrate, remove CO₂ and other trace gases and pressurize it to inject into natural gas pipelines.

Emerson's solutions can play a critical role in helping our customers meet and exceed emerging environmental sustainability regulatory requirements. Our customers are identifying and implementing strategies for lowering emissions by transitioning to cleaner power and fuel alternatives — a core element of most decarbonization strategies across most industrial sectors. One example is biomethane injection into the natural gas stream used to generate electricity, which is helping companies meet regulatory requirements and contribute toward the European Union's renewable energy targets. Emerson's scalable, smart, and integrated systems and solutions help natural gas operators comply with current legislation and lower life cycle costs.

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

0.1

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

Yes, other structural change, please specify

Including all relevant scope 3 categories this year

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

N/A

Details of structural change(s), including completion dates

We update our inventory and recalculate previous years on an annual basis as better data is available or as errors arise that trigger our re-calculation threshold of .5%. For FY21, we filled recently unknown gaps in our corporate mobile emissions as well as made estimates of refrigerants. We also update historical electricity and fuel data for manufacturing facilities when we have improved data.

In addition, we have calculated and are including all scope 3 categories in the year's response whereas last year we were only able to report scope 3 categories 1 through 3.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology Yes, a change in boundary	We update our inventory and recalculate previous years on an annual basis as better data is available or improvements in data collection are made. For FY21, we filled recently unknown gaps in our corporate mobile emissions as well as made estimates of refrigerants. We also update historical electricity and fuel data for manufacturing facilities when the data quality becomes better. In addition, we have calculated and are including all scope 3 categories in the year's response whereas last year we were only able to report scope 3 categories 1 through 3. We have updated the methodology for scope 3 category 1 and 2.

C5.1c

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

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	Emerson will follow the guidelines in the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), by the World Business Council for Sustainable Development and the World Resources Institute, for adjusting the base year greenhouse gas inventory. The base year inventory will be adjusted in response to any structural or methodology changes if the resulting adjustment is more than 0.5% of base year emissions. Adjustments less than this threshold are considered insignificant and will be decided case by case. If the structural change is a merger or acquisition, the emissions from the facilities of the acquired entity will be added to the base year inventory. Base year emissions for acquired facilities will ideally be calculated using actual consumption data for the base year. If this is unavailable, the earliest year of data will be used and kept constant back to the base year. Emissions from facilities that are part of a divested business unit will be removed from the base year inventory. The base year inventory will also be adjusted in response to any errors discovered or changes in calculation methodologies or emission factors. The

		base year will not be adjusted for organic growth or not part of a structural change.
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C5.2

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

Scope 1

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO₂e)

202,998

Comment

Emerson has recalculated its base year to account for improvements in data collection.

Scope 2 (location-based)

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO₂e)

709,532

Comment

Emerson has recalculated its base year to account for improvements in data collection.

Scope 2 (market-based)

Base year start

October 1, 2017

Base year end

September 30, 2018

Base year emissions (metric tons CO₂e)

711,997

Comment

Emerson has recalculated its base year to account for improvements in data collection.

Scope 3 category 1: Purchased goods and services

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

1,960,000

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions.

Scope 3 category 2: Capital goods

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

89,500

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

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

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

163,000

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3 category 4: Upstream transportation and distribution

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

403,000

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3 category 5: Waste generated in operations

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

52,100

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3 category 6: Business travel

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

19,200

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3 category 7: Employee commuting

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

155,000

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3 category 8: Upstream leased assets

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

0

Comment

Not relevant

Scope 3 category 9: Downstream transportation and distribution

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

400,000

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions.

Scope 3 category 10: Processing of sold products

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

3,000

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3 category 11: Use of sold products

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

588,000,000

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

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

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

150,000

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3 category 13: Downstream leased assets

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

0

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3 category 14: Franchises

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

0

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3 category 15: Investments

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

2,000

Comment

Emerson performed a screening level inventory on all scope 3 categories for FY21. We consider this our base year for scope 3 emissions

Scope 3: Other (upstream)

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

0

Comment

Not relevant.

Scope 3: Other (downstream)

Base year start

October 1, 2020

Base year end

September 30, 2021

Base year emissions (metric tons CO₂e)

0

Comment

Not relevant.

C5.3

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

Environment Canada, Primary Iron and Steel Production, Guidance Manual for Estimating Greenhouse Gas Emissions

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

The Greenhouse Gas Protocol: Scope 2 Guidance

US EPA Center for Corporate Climate Leadership: Indirect Emissions From Purchased Electricity

US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources

US EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources

US EPA Emissions & Generation Resource Integrated Database (eGRID)

Other, please specify

EPA Emission Factors for Greenhouse Gas Inventories, April 2021 U.S. EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion/ Mobile/ Purchased Elec

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO₂e?

Reporting year

Gross global Scope 1 emissions (metric tons CO₂e)

195,945

Start date

October 1, 2020

End date

September 30, 2021

Comment

Past year 1

Gross global Scope 1 emissions (metric tons CO₂e)

179,149

Start date

October 1, 2019

End date

September 30, 2020

Comment

Past year 2

Gross global Scope 1 emissions (metric tons CO₂e)

196,962

Start date

October 1, 2018

End date

September 30, 2019

Comment

Past year 3

Gross global Scope 1 emissions (metric tons CO₂e)

202,998

Start date

October 1, 2017

End date

September 30, 2018

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

C6.3

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

Reporting year

Scope 2, location-based

604,629

Scope 2, market-based (if applicable)

601,141

Start date

October 1, 2020

End date

September 30, 2021

Comment

Market-based emissions follow the GHG protocol scope 2 guidance. Market-based factors include European residual factors along with purchased renewable energy.

Past year 1

Scope 2, location-based

619,446

Scope 2, market-based (if applicable)

615,961

Start date

October 1, 2019

End date

September 30, 2020

Comment

Past year 2

Scope 2, location-based

701,556

Scope 2, market-based (if applicable)

704,052

Start date

October 1, 2018

End date

September 30, 2019

Comment

Past year 3

Scope 2, location-based

709,532

Scope 2, market-based (if applicable)

711,997

Start date

October 1, 2017

End date

September 30, 2018

Comment

C6.4

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

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

1,960,000

Emissions calculation methodology

Spend-based method

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

0

Please explain

Cradle-to-gate emissions from our purchased goods and services were calculated using supplier spend multiplied by Environmentally-Extended Input-Output (EEIO) factors. Our total direct and indirect spend is aggregated into standard vendor sector categories. The spend in each category is multiplied by sector-specific cradle-to-gate emission factors. Emissions factors are from the US EPA Environmentally-Extended Input-Output (EEIO) database. GWPs are IPCC Second Assessment Report (SAR - 100 year).

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

89,500

Emissions calculation methodology

Spend-based method

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

0

Please explain

Our capital goods our calculated according to the same methodology as category 1 and included in category 1 numbers, so we are reporting them as 0 here.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

163,000

Emissions calculation methodology

Fuel-based method

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

0

Please explain

The activity data used to quantify these activities' emissions are the quantity consumed of each energy type, such as electricity or natural gas. Consumption by fuel type is then multiplied by emission factors for each of the three activities included in this category. Emission factors for upstream emissions of purchased fuels are based on life-cycle analysis software. Emission factors for upstream emissions of purchased electricity are based on life-cycle analysis software for the U.S., and on U.K. Defra Guidelines for other countries. Emission factors for transmission and distribution losses are location-based and taken from EPA's eGRID database for the U.S., and on IEA's CO2 Emissions from Fuel Combustion (2021 Edition) for other countries. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

403,000

Emissions calculation methodology

Distance-based method

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

100

Please explain

Tonnage and mileage, by transport mode, for Emerson-managed and paid distribution was collected at a shipment level using Emerson's Oracle Transportation Management tool (OTM), which is used to manage all shipments managed and paid for by Emerson globally. This resulted in a ton-mile by mode values for truck, ocean, air, parcel, and rail. Ton- miles are then multiplied by the mode specific emission factors from the GHG Emissions Calculation Tool spreadsheet to obtain emissions.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

52,100

Emissions calculation methodology

Waste-type-specific method

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

0

Please explain

Waste data, including the waste type and destination are collected for Emerson manufacturing facilities. Waste for offices is estimated. Emissions from waste are calculated using methodologies and emission factors from the EPA's Waste Reduction Model (WARM). This model calculates emissions based on a life-cycle analysis, including emissions from the long-term decomposition of waste in a landfill or from upstream sources/sinks. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

19,200

Emissions calculation methodology

Distance-based method

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

100

Please explain

Business travel data for Emerson includes air travel, rental car, rail travel, and hotel stays. Activity data includes passenger miles and hotel nights. Emerson Global Travel Manager obtained datasets from American Express, CWT & EHI. Emissions were calculated using emission factors and methodologies from the Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

155,000

Emissions calculation methodology

Distance-based method

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

0

Please explain

Data on Emerson headcount if provided by the HR department and categorized into world area and country. Emerson estimates distance travelled based on the average data assumptions on national commuting patterns to determine passenger miles. These are multiplied by the EPA Emission Factors for Greenhouse Gas Inventories version April 2021.

Upstream leased assets

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

0

Emissions calculation methodology

Asset-specific method

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

0

Please explain

Under the operational control approach of defining our inventory boundary, emissions from all upstream leased assets are included in our Scope 1 and Scope 2 emissions. Therefore, emissions in this category are 0.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

300,000

Emissions calculation methodology

Hybrid method

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

0

Please explain

Due to a lack of data and transparency in downstream shipment data paid for by other entities, Category 4 - Upstream T&D was used as a proxy to estimate Category 9 - Downstream T&D. Customer paid freight should be more regional since we're only looking at the movement between Emerson location and Emerson customer (not final customer), which in many cases is a regional distribution center. If this is the case, less distance is traveled and ground transport is more prevalent.

As such, downstream T&D emissions are likely less than or equal to our upstream emission impact, although this is not currently backed up by hard data. As a conservative estimate for baseline, upstream T&D emissions can be used as a proxy.

Processing of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,000

Emissions calculation methodology

Average product method

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

0

Please explain

We have estimated our category 10 GHG emissions to be 3,000 MT CO₂e.. This number includes the energy consumed by the screwing and tightening of bolts, as well as some minor brazing in a subset of our products. We do not have access to primary data on the installation procedures so this calculation is an estimate, using expert knowledge and available industry data. We expect that about 25% of our overall portfolio of products may require the use of an electrically-driven powertool, and that half of those products may need some minor brazing. The remainder 75% of the products are manually installed. We view this to be a conservative estimate, as it is likely that fewer than 25% of our products will actually need electrically-driven installation processes. We assumed an average emission factor based on our entire dataset.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

588,000,000

Emissions calculation methodology

Methodology for direct use phase emissions, please specify

We collect data on the average power or fuel use, run time, number of units sold, and lifetime of product categories to calculate the lifetime energy use for products groups and multiply this by the appropriate emission factor

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

0

Please explain

The use of sold products includes the lifetime emissions associated with Emerson products which directly consume energy (fuels or electricity) during their use phase. Across all business units, we have aggregated product models into categories. It is not feasible at this stage to collect product data (i.e., power usage, running time, lifetime) across every single product model or product line for all of Emerson's businesses. We apply product design specifications and assumptions on how consumers use power to estimate the lifetime energy use per product group. Electricity emissions factors from the IEA 2021 version are then applied to estimate emissions globally.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

150,000

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 expected emissions from the waste disposal and treatment (e.g., landfilling, incineration, and recycling) of products sold by the Emerson, in the reporting year, at the end of their life.

Downstream leased assets

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

0

Emissions calculation methodology

Asset-specific method

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

0

Please explain

Emissions in this category are insignificant, because we have an inconsequential amount of owned spaced that is leased to others. Therefore, these emissions are 0.

Franchises

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

0

Emissions calculation methodology

Franchise-specific method

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

0

Please explain

Emerson does not have any franchises. This is therefore 0 and not relevant.

Investments

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

2,000

Emissions calculation methodology

Average data method

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

0

Please explain

Emerson collects data on the revenue of the investee company, the sector the investee company operates in, and the investor's proportional share of equity in the investee to calculate the value of each investment. The value is multiplied by the EPA EEIO emission factor for the sector of the economy that the investments are related to.

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

Please explain

C6.5a

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

Past year 1

Start date

October 1, 2019

End date

September 30, 2020

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

2,300,000

Scope 3: Capital goods (metric tons CO2e)

0

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

131,000

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

0

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

0

Scope 3: Business travel (metric tons CO2e)

0

Scope 3: Employee commuting (metric tons CO2e)

0

Scope 3: Upstream leased assets (metric tons CO2e)

0

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

0

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

0

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

0

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

0

Scope 3: Downstream leased assets (metric tons CO2e)

0

Scope 3: Franchises (metric tons CO2e)

0

Scope 3: Investments (metric tons CO2e)

0

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

0

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

0

Comment

We consider FY2021 as our base year. We calculated screening level emissions in FY20 for only a few categories.

Past year 2

Start date

October 1, 2018

End date

September 30, 2019

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

0

Scope 3: Capital goods (metric tons CO2e)

0

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

0

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

0

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

0

Scope 3: Business travel (metric tons CO2e)

0

Scope 3: Employee commuting (metric tons CO2e)

0

Scope 3: Upstream leased assets (metric tons CO2e)

0

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

0

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

0

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

0

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

0

Scope 3: Downstream leased assets (metric tons CO2e)

0

Scope 3: Franchises (metric tons CO2e)

0

Scope 3: Investments (metric tons CO2e)

0

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

0

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

0

Comment

We consider FY2021 as our base year and do not have historical scope 3 emissions. We are providing past year data for scope 1 and 2 data.

Past year 3

Start date

October 1, 2017

End date

September 30, 2018

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

0

Scope 3: Capital goods (metric tons CO2e)

0

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

0

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

0

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

0

Scope 3: Business travel (metric tons CO2e)

0

Scope 3: Employee commuting (metric tons CO2e)

0

Scope 3: Upstream leased assets (metric tons CO2e)

0

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

0

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

0

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

0

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

0

Scope 3: Downstream leased assets (metric tons CO2e)

0

Scope 3: Franchises (metric tons CO2e)

0

Scope 3: Investments (metric tons CO2e)

0

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

0

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

0

Comment

consider FY2021 as our base year and do not have historical scope 3 emissions. We are providing past year data for scope 1 and 2 data.

C-CG6.6

(C-CG6.6) Does your organization assess the life cycle emissions of any of its products or services?

	Assessment of life cycle emissions	Comment
Row 1	Yes	One of the most important aspects of reducing our carbon impact is to understand the life cycle footprint of our products and solutions portfolio. Life cycle assessments (LCA) are an important tool to help identify the amount of embedded carbon in our products and to help our teams prioritize steps that can be taken to improve. Emerson utilizes widely accepted processes and databases to conduct lifecycle assessments. Additionally, LCAs form the basis of many sustainable product policies worldwide, such as the Eco-design Directive in the European Union.

C-CG6.6a

(C-CG6.6a) Provide details of how your organization assesses the life cycle emissions of its products or services.

	Products/services assessed	Life cycle stage(s) most commonly covered	Methodologies/standards/tools applied	Comment
Row 1	Representative selection of products/services	Cradle-to-grave	ISO 14040 & 14044 ISO 14067	The LCA process provides a good perspective on the environmental impact of a product and helps to inform relative priorities for reducing overall carbon. We have conducted several LCA studies across our portfolio. In a recent life cycle assessment for a Micro Motion Coriolis flowmeter, our team gained valuable insight to the primary contributors of GHG emissions in our meters from the process energy in our factory, purchased components and end of life considerations. These insights were utilized to prioritize improvements in the energy efficiency of our manufacturing and reduce corresponding emissions. The insights gained from this LCA were instrumental in the design of a new Micro Motion hydrogen dispensing Coriolis flowmeter released in 2021. The new design and enhanced manufacturing processes have resulted in a reduction of 15% of

				the embedded carbon of prior designs. In the longer term, learnings from LCA studies like these will better inform our new product design choices, sustainable packaging options and manufacturing approaches.
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C6.7

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

Yes

C6.7a

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

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	2,657	One large manufacturing site in India burns biomass briquettes as a fuel source instead of fossil based fuels. The CH4 and N2O emissions are included in our Scope 1 and 2 values.

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

0.0000437

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

797,086

Metric denominator

unit total revenue

Metric denominator: Unit total

18,236,000,000

Scope 2 figure used

Market-based

% change from previous year

4.15

Direction of change

Decreased

Reason for change

We achieved this reduction throughout a variety of emission reduction initiatives as outlined in our projects in question 4.3b. This includes purchase of renewable energy in addition to ongoing energy efficiency projects at our manufacturing locations.

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	185,176	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	163	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	390	IPCC Fourth Assessment Report (AR4 - 100 year)
Other, please specify Refrigerant R-404A	8,417	IPCC Fourth Assessment Report (AR4 - 100 year)
Other, please specify Refrigerant R-134A	1,799	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	101,842.4
Mexico	28,261.4
China	8,402.4
United Arab Emirates	4,389.2
Germany	3,537.1
Italy	2,466.3
France	2,755.3
India	1,479.1
Thailand	2,429.2
Brazil	110.5
Romania	1,713.4
Slovakia	274.5
Canada	1,506.7
Russian Federation	1,277.6
Hungary	985.2
Spain	769.8
United Kingdom of Great Britain and Northern Ireland	1,042.6
Other, please specify Rest of world	29,851.1
Netherlands	882.2
Belgium	847.8
Republic of Korea	1,121

C7.3

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

By business division

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)
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Emerson Commercial & Residential Solutions	82,597
Emerson Automation Solutions	100,350
Other - Corporate	12,997

C7.3c

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

Activity	Scope 1 emissions (metric tons CO ₂ e)
mobile combustion	54,264
Refrigerants	10,216
stationary combustion	131,465

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)
Mexico	84,165	84,227
China	102,364	102,364
India	18,277	15,693
United Arab Emirates	11,947	11,947
Thailand	14,135	14,135
Germany	6,969	11,397
Singapore	4,433	4,433
Italy	4,381	7,022
Romania	4,060	364
Czechia	4,166	356
Australia	3,630	3,630
Poland	3,948	4,581
Slovakia	467	735
Belgium	2,253	441
Netherlands	2,542	2,141
Japan	2,472	2,472
Hungary	2,014	2,411
Philippines	2,779	2,779
Spain	1,377	1,981

United Kingdom of Great Britain and Northern Ireland	1,808	2,709
Sweden	324	315
Other, please specify Rest of world	19,758	18,588
Ireland	109	165
United States of America	306,257	306,257

C7.6

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

- By business division
- 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)
Emerson Commercial & Residential Solutions	327,207	318,857
Emerson Automation Solutions	246,605	251,461
Other (Corporate)	30,817	30,823

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)
purchased electricity	603,205	599,717
purchased steam	429	429
hot water	995	955

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

- Increased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	1,069	Decreased	0.1	Emerson purchased an additional renewable which resulted in an increase of 1069 MT CO2e in emissions savings. This was calculated by taking the MT CO2e saved by RE between FY20 and FY21 and dividing it by the emissions reported last year $(18217 - 17,148) / 765,742 = .1$
Other emissions reduction activities	10,388	Decreased	1.36	Absolute emissions increased by 4.1% while revenue increased by a greater 8.6%. Emission reduction initiatives tempered this increase. The emissions reduction percentage was calculated by dividing the amount of emission reductions from 4.3a (excluding the RE purchases) by the emissions reported last year. $10388 / 765,742 = 1.36\%$
Divestment				N/A
Acquisitions				N/A
Mergers				N/A
Change in output	66,196	Increased	8.6	Total revenue increased 8.6%, and Emerson has determined that an increase in revenue is directly linked to an increase in production and GHG emissions.
Change in methodology	29,637	Increased	3.8	We recalculated our inventory and base year to include improved and more accurate data. This includes addition of refrigerants and improved data collection in our corporate mobile emissions.
Change in boundary				N/A

Change in physical operating conditions				N/A
Unidentified				N/A
Other				N/A

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

C-CG7.10

(C-CG7.10) How do your total Scope 3 emissions for the reporting year compare to those of the previous reporting year?

Increased

C-CG7.10a

(C-CG7.10a) For each Scope 3 category calculated in C6.5, specify how your emissions compare to the previous year and identify the reason for any change.

Purchased goods and services

Direction of change

Decreased

Primary reason for change

Change in methodology

Change in emissions in this category (metric tons CO₂e)

340,000

% change in emissions in this category

17

Please explain

We updated our methodology from a hybrid approach to a spend based approach where we mapped our direct and indirect spend to the EEIO categories and emission factors. We were also able to separate out our capital goods into category 2.

Capital goods

Direction of change

Increased

Primary reason for change

Change in methodology

Change in emissions in this category (metric tons CO2e)

89,500

% change in emissions in this category

100

Please explain

We updated our methodology from a hybrid approach to a spend based approach where we mapped our direct and indirect spend to the EEIO categories and emission factors. We were also able to separate out our capital goods into category 2 and report a value for category 2.

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

Direction of change

Increased

Primary reason for change

Change in output

Change in emissions in this category (metric tons CO2e)

32,000

% change in emissions in this category

20

Please explain

We restated our FY20 emissions in this category because we updated our methodology to include the IEA international T&D loss emission factors which are more accurate than our previous international T&D factors. Our operational scope 1 and 2 energy consumption increased between FY20 and FY21, and therefore the associated fuel and energy related emissions increased. We calculate these emissions using a location-based approach.

Upstream transportation and distribution

Direction of change

First year of reporting this category

Waste generated in operations

Direction of change

First year of reporting this category

Business travel

Direction of change

First year of reporting this category

Employee commuting

Direction of change

First year of reporting this category

Upstream leased assets

Direction of change

First year of reporting this category

Downstream transportation and distribution

Direction of change

First year of reporting this category

Processing of sold products

Direction of change

First year of reporting this category

Use of sold products

Direction of change

First year of reporting this category

End-of-life treatment of sold products

Direction of change

First year of reporting this category

Downstream leased assets

Direction of change

First year of reporting this category

Franchises

Direction of change

First year of reporting this category

Investments

Direction of change

First year of reporting this category

C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	837,319	837,319
Consumption of purchased or acquired electricity		48,519	1,226,921	1,275,440

Consumption of purchased or acquired heat		0	2,803	2,803
Consumption of purchased or acquired steam		0	1,355	1,355
Consumption of self-generated non-fuel renewable energy		4,179		4,179
Total energy consumption		52,689	2,068,399	2,121,096

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

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

Comment

Other biomass

Heating value

HHV

Total fuel MWh consumed by the organization

6,590

Comment

Emerson consumes a small amount of biomass at one facility

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

Comment

Coal

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

Comment

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

4,235

Comment

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

826,495

Comment

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

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

Comment

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

837,319

Comment

C8.2d

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	4,179	4,179	4,179	4,179
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

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.

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

71% hydro, 17% biomass, 6% wind, 2% bio gas, 1% solar, 4% other

Country/area of low-carbon energy consumption

Belgium

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

11,415

Country/area of origin (generation) of the low-carbon energy or energy attribute

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

Comment

Emerson purchases renewable energy for 100% of some sites through power purchase agreements.

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

8% biomass, 22% biogas, 25% hydro, 18% wind, 27% solar

Country/area of low-carbon energy consumption

Czechia

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

8,693

Country/area of origin (generation) of the low-carbon energy or energy attribute

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

Comment

Emerson purchases renewable energy for 100% of some sites through contractual agreements with local utilities. The renewable energy mix contains a small amount of biogas and biomass. We cannot confirm at the time if this is sustainable or not.

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Country/area of low-carbon energy consumption

Germany

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

769

Country/area of origin (generation) of the low-carbon energy or energy attribute

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

Comment

Emerson purchases renewable energy for 100% of some sites through power purchase agreements.

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
Solar and wind

Country/area of low-carbon energy consumption

Netherlands

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

2,143

Country/area of origin (generation) of the low-carbon energy or energy attribute

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

Comment

Emerson purchases renewable energy for 100% of some sites through power purchase agreements.

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
Solar and wind

Country/area of low-carbon energy consumption

Ireland

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

9,092

Country/area of origin (generation) of the low-carbon energy or energy attribute

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

Comment

Emerson purchases renewable energy for 100% of some sites through power purchase agreements.

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
40% solar, 60% hydro

Country/area of low-carbon energy consumption

Romania

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

10,386

Country/area of origin (generation) of the low-carbon energy or energy attribute

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

Comment

Emerson purchases renewable energy for 100% of some sites through power purchase agreements.

Sourcing method

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify
74% hydro, 25% wind, 1% solar

Country/area of low-carbon energy consumption

Sweden

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

1,534

Country/area of origin (generation) of the low-carbon energy or energy attribute

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

Comment

Emerson purchases renewable energy for 100% of some sites through power purchase agreements.

C8.2g

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

Country/area

United States of America

Consumption of electricity (MWh)

609,957

Consumption of heat, steam, and cooling (MWh)

0

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

609,957

Country/area

Mexico

Consumption of electricity (MWh)

211,414

Consumption of heat, steam, and cooling (MWh)

0

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

211,414

Country/area

China

Consumption of electricity (MWh)

163,600

Consumption of heat, steam, and cooling (MWh)

0

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

163,600

Country/area

Thailand

Consumption of electricity (MWh)

30,365

Consumption of heat, steam, and cooling (MWh)

0

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

30,365

Country/area

India

Consumption of electricity (MWh)

25,171

Consumption of heat, steam, and cooling (MWh)

0

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

25,171

Country/area

United Arab Emirates

Consumption of electricity (MWh)

23,654

Consumption of heat, steam, and cooling (MWh)

0

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

23,654

Country/area

Germany

Consumption of electricity (MWh)

20,124

Consumption of heat, steam, and cooling (MWh)

0

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

20,124

Country/area

France

Consumption of electricity (MWh)

15,437

Consumption of heat, steam, and cooling (MWh)

0

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

15,437

Country/area

Italy

Consumption of electricity (MWh)

15,314

Consumption of heat, steam, and cooling (MWh)

0

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

15,314

Country/area

Belgium

Consumption of electricity (MWh)

13,566

Consumption of heat, steam, and cooling (MWh)

0

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

13,566

Country/area

Other, please specify
Rest of World

Consumption of electricity (MWh)

146,837

Consumption of heat, steam, and cooling (MWh)

4,158

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

150,995

C-CG8.5

(C-CG8.5) Does your organization measure the efficiency of any of its products or services?

	Measurement of product/service efficiency	Comment
Row 1	No, but we plan to start doing so within the next two years	We are in the process of measuring efficiency of our products. At this time, we do not have the data to publicly report in 8.5a

C9. Additional metrics

C9.1

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

Description

Energy usage

Metric value

2,116,917

Metric numerator

MWH

Metric denominator (intensity metric only)

N/A

% change from previous year

3.8

Direction of change

Increased

Please explain

During fiscal year 2021, operations increased resulting from a rebound following the pandemic in 2020.

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	Emerson has committed to invest \$100 million in Emerson Ventures, our corporate venture capital initiative designed to access and support early-stage technology development. This investment commitment is focused on disruptive automation innovations, important environmental sustainability solutions and emerging industrial software technology for use in critical industries. Our objective is to invest in four to six early-stage startups each year over the next five years.

C-CG9.6a

(C-CG9.6a) Provide details of your organization’s investments in low-carbon R&D for capital goods products and services over the last three years.

Technology area

Hydrogen power

Stage of development in the reporting year

Small scale commercial deployment

Average % of total R&D investment over the last 3 years

≤20%

R&D investment figure in the reporting year (optional)

Comment

Hydrogen is an important strategy in the energy transition roadmaps of the world. Like electricity, hydrogen serves as an energy carrier. Hydrogen molecules are generated from other forms of primary energy and then transported and utilized in end-use

applications. Emerson technologies are significantly involved in both the end-use cases as well as the generation, transportation and dispensing of hydrogen.

In 2021, we began working with BayoTech, an innovator in distributed hydrogen solutions, to accelerate the availability of hydrogen for end-use cases in North America and Europe. Emerson is serving as BayoTech’s automation partner and is providing control system, instrumentation, valves and operations software to remotely manage BayoTech’s network of hydrogen generation hubs. BayoTech uses natural gas and renewable natural gas to generate hydrogen which can enable mobility and hard to abate sector hydrogen applications.

In a large green hydrogen power generation application, Emerson is collaborating with Mitsubishi Power to provide automation systems for the transformation of the Intermountain Power Plant in Utah. This facility will feature hydroelectric, wind and solar electricity powering a large electrolyzer to generate hydrogen from water. The produced hydrogen will be stored underground in salt caverns so that it can be dispatched when required to power turbines that create electricity. The initial phase will utilize hydrogen blended with natural gas but will eventually transition to 100% green hydrogen. This is a strategic project as governments around the world build green hydrogen power generation into their roadmaps.

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	No third-party verification or assurance

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

 ERM CVS - Assurance Statement for Emerson Electric Co. FY2021.pdf

Page/ section reference

N/A

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process


Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 ERM CVS - Assurance Statement for Emerson Electric Co. FY2021.pdf

Page/ section reference

N/A

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process


Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 ERM CVS - Assurance Statement for Emerson Electric Co. FY2021.pdf

Page/ section reference

N/A

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?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

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

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

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, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change

% of suppliers by number

0.1

% total procurement spend (direct and indirect)

88

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

5

Rationale for the coverage of your engagement

For our regional Greening Together Summits, which were held in St. Louis, USA, and Aachen, Germany, we identified suppliers with high levels of engagement and interest, who were also high contributors to our Scope 3 emissions, to invite to in-person, two-day conference-style meetings. During these meetings, we shared Emerson's vision and values, facilitated educational presentations from experts on sustainability topics, and facilitated best-practice sessions and panels. In each of these summits, we sought to include suppliers from a range of industries that don't directly compete for business, i.e. castings, stamping, electronics, logistics, plastics, magnet wire, steel, and pulp & paper. Between the North American and European summit, we've had 17 suppliers in attendance, with an Asia-Pacific summit planned for later this year.

Impact of engagement, including measures of success

The Greening Together Summits have been uniquely successful in providing opportunities for focused discussion on sustainability topics, along with being jumping off points for more in-depth and practical collaboration. Some of the results and follow-ups include: on-site visit with supplier to do a collaborative energy audit, scope 3 emission validation exercises, initiation of a collaborative LCA study, follow-up discussions on sustainable packaging opportunities, and one of the supplier attendees

releasing their first ESG report – along with the various learnings and take-aways that came out of the summit conversations. We plan to continue these more involved collaborations with key suppliers to take a proactive approach to making our supply chain more sustainable. Emerson considers this engagement effort successful if at least 5% of our key suppliers in that geographical region are represented.

Comment

We are proud to have a diverse supplier network to serve our 185+ manufacturing locations worldwide that serve the ever-changing needs of our innovative, global customers. We have more than 18,000 suppliers that we are proud to partner with, ranging from billion-dollar enterprises to regional and local shops. As we continue on our journey to become more sustainable, we thought it best for this year to use the metrics of our full supplier base, the 18,000, in calculating these important factors, as represented in the “% of suppliers by number” calculation.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Emerson is utilizing its unique technical perspective and global reach to collaborate with governments and policy groups, research institutions, non-government organizations, industry associations and communities to discuss the way forward to a more sustainable future. Our strategy is to include important dialogues on innovations, policy options, supporting at-scale implementations of novel solutions and formulating essential strategies for the roadmaps to a net zero world. Emerson’s collaboration efforts are driven by three main strategies:

- 1 - Engaging our Governments and Policy Groups at the sectoral and regional levels.
- 2 - Collaborating with Leading Research Institutions
- 3 - Convening Leaders and Communities

Example:

Engaging our Governments and Policy Groups

Emerson recognizes that partnerships with governments, industry groups and other leading organizations are key to achieving our shared sustainability ambitions. We continue to be an active voice in groups such as UK FIRES, IfM Sustainability Association, the Association of Energy Engineers and the EPA’s Energy Star Partnership. We have also joined several organizations specifically dedicated to collaboration and achieving shared decarbonization goals, including:

- Business Ambition for 1.5°C partnership, which features companies committing to both a near-term science-based target alongside an explicit longer-term net zero commitment.
- RE100 and the Clean Energy Buyer’s Association (CEBA) as they bring together global businesses committed to sourcing 100% renewable electricity.

Renewable Natural Gas Coalition, which advocates for sustainable development, deployment and utilization of renewable natural gas. This directly relates to our operational emissions.

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

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

Yes, we engage indirectly through trade associations

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)

Emerson 2021 ESG Report

 emerson-2021-environmental-social-governance-report-en-us-8186672.pdf

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

Greening With Emerson is an important strategy for engagement, dialogue, advocacy and amplification with key stakeholders around the world. These discussions help build broad support for making progress in deploying early novel solutions at-scale to learn about technical, economic and policy challenges and options. The faster we can make these important, early-stage projects happen, the sooner we can validate whether and how these solutions will be major contributors to delivering a net zero world.

Emerson recognizes that partnerships with governments, industry groups and other leading organizations are key to achieving our shared sustainability ambitions. Our process is to be an active voice in groups such as UK FIRES, IfM Sustainability Association, the Association of Energy Engineers and the EPA's Energy Star Partnership.

C12.3b

(C12.3b) Provide details of the trade associations your organization 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

RE100 and Clean Energy Buyer's Association (CEBA)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

RE100 and CEBA bring together global businesses committed to sourcing 100% renewable electricity. This is important for Emerson and other companies that have commitments towards 100% renewable energy. It offers collaboration regarding energy strategies that align with our sustainability targets and goals.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

10,000

Describe the aim of your organization's funding

Membership dues

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Renewable Natural Gas Coalition

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The Coalition for Renewable Natural Gas (RNG Coalition) serves as the public policy advocate and education platform for Renewable Natural Gas in North America. Through public policy and education, RNG Coalition advocates for sustainable development, deployment and utilization of renewable natural gas so that present and future generations will have access to domestic, renewable, clean fuel and energy.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

55,000

Describe the aim of your organization's funding

Membership dues and Sponsorship participation

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

European Clean Hydrogen Alliance

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The European Clean Hydrogen Alliance aims at an ambitious deployment of hydrogen technologies by 2030, bringing together renewable and low-carbon hydrogen production, demand in industry, mobility and other sectors, and hydrogen transmission and distribution. With the alliance, the EU wants to build its global leadership in this domain, to support the EU's commitment to reach carbon neutrality by 2050.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

0

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 voluntary sustainability report

Status

Complete

Attach the document

 emerson-2021-environmental-social-governance-report-en-us-8186672.pdf

 emerson-2021-environmental-social-governance-report-en-ca-8206580.pdf

Page/Section reference

Governance – pg 58 – 63

Strategy – pg 5, 10-12, 16

Risks & Opps – pg 60, 61, 64

Emissions figures 15, 22, 96-99

Emissions targets– pg 11, 14, 16-21

Other metrics – 19, 22, 98-99

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Comment

Our efforts to drive Emerson’s leadership on environmental, social and governance (ESG) issues have been a top priority of Executive Management. This includes being transparent and disclosing ESG strategy, goals, risks, targets, emissions and governance oversight, which is all published in our ESG report.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, executive management-level responsibility	Our Chief Sustainability Officer has the executive management-level responsibility for biodiversity-related matters within the organization.

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 impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	No, and we do not plan to assess biodiversity-related impacts within the next two years

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	

C15.6

(C15.6) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
No publications		

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Sr VP & Chief Sustainability Officer	Chief Sustainability Officer (CSO)