CDP Climate Change Questionnaire 2021

Respondent: TotalEnergies

C0 Introduction

Introduction

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

Total became TotalEnergies in May 2021 and thus anchored in its identity its strategic transformation into a multi-energy company. Rising to the dual challenge of meeting the energy needs of a growing world population while reducing global warming; reinventing energy production and consumption in order to get to Net Zero by 2050, together with society — those tasks underlie the “raison d’être” of TotalEnergies, which is to supply to as many people as possible a more affordable, more available and cleaner energy.

TotalEnergies is present on five continents and in more than 130 countries, with consolidated sales of 140,665 million USD in 2020 and is expanding in the production, transportation, trading and distribution of energies to the end customer.

As well as conducting its business according to the highest standards of professional behaviour, TotalEnergies maintains an ongoing commitment to transparency, dialogue and respect for others. The Company is strategically dedicated to meeting the challenges faced by all its businesses when developing natural resources, protecting the environment, integrating our operations into host country cultures, and dialoguing with civil society.

TotalEnergies’ activities are divided into 4 main business segments:

- The Integrated Gas, Renewables & Power segment is driving the Company’s ambition in the activities of the integrated gas and electricity chains, as well as the activities that contribute to carbon neutrality. The execution of a profitable growth strategy in these promising businesses is helping to achieve the Company’s ambition to get to Net Zero by 2050 together with society.
- The Exploration & Production segment encompasses the oil and natural gas exploration and production activities.

- Refining & Chemicals is a large industrial segment that encompasses refining, base petrochemicals (olefins and aromatics), polymer derivatives (polyethylene, polypropylene, polystyrene and hydrocarbon resins), the transformation of biomass and the transformation of elastomers (Hutchinson). This segment is committed to the development of low carbon solutions, in particular biofuels, biopolymers and recycled polymers obtained from chemical or mechanical recycling. It also includes the activities of Trading & Shipping.
- The Marketing & Services segment includes worldwide supply and marketing activities of oil products and services. It is also growing in low carbon fuels and new energies for mobility.

The Company integrates climate into its strategy, considering an evolution of the energy markets in line with the challenges of climate change. TotalEnergies establishes its strategy and long-term price trajectory taking in particular into account the IEA's Sustainable Development Scenario.

The world's energy mix needs to change if the objectives of the Paris Agreement are to be achieved. As a broad energy company, therefore, TotalEnergies has factored this development into its strategy and set itself the ambition to achieve carbon neutrality (net zero emissions) by 2050 from its production to the use of the energy products sold to its customers (Scopes 1, 2, 3), together with society.
To accompany this development and achieve its carbon neutrality ambition (net zero emissions) in 2050 or sooner, for all its worldwide activities, TotalEnergies acts based on three main axes:

- Achieve in 2050 or sooner carbon neutrality (net zero emissions) for TotalEnergies' worldwide operated activities (Scopes 1 & 2).
- Achieve carbon neutrality (net zero emissions) worldwide for indirect GHG emissions related to the use by its customers of energy products sold for end use (Scope 3) in 2050 or sooner.
- Achieve carbon neutrality (net zero emissions) in Europe (EU27, Norway, UK and Switzerland) from the production to the use by its customers of energy products sold for end use in 2050 or sooner (Scopes 1, 2, 3).

To fulfill its ambition, the Company is relying on four strategic levers as described in the TotalEnergies' URD chapter 5 from page 248 to page 252: reducing its greenhouse gas emissions, diversifying its products, guiding its customers through the low-carbon transition and developing carbon sinks.

TotalEnergies intends to strengthen its involvement in the circular economy and implement a program of innovative responsible actions, particularly in the following areas: purchasing, waste management, new ranges of polymers, solarization of its own industrial sites and service stations and improved energy efficiency. TotalEnergies also acknowledges the growing pressure on natural resources, including water which has been identified as a priority in the Company's environmental management and R&D efforts. The need to reduce water use from natural environments, to minimize TotalEnergies' water dependency and to lower emissions to water in compliance with local, national and international regulations is thus clearly part of the Company's priorities.

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

01/01/2020 – 31/12/2020

Indicate if you are providing emissions date for past reporting years

[x] Yes, 2 years

(C0.3) Select the countries/areas for which you will be supplying data.

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

USD ($)

(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.

[x] Operational control

Organizational activities: Chemicals

(C-CH0.7) Which part of the chemicals value chain does your organization operate in?

Bulk organic chemicals

[x] Lower Olefins (cracking)

[x] Aromatics

[x] Ethylene Oxide & Ethylene glycol

[x] Ethanol

[x] Methanol

[x] Polymers

[ ] Adipic acid

Bulk inorganic chemicals

[ ] Ammonia

[ ] Fertilizers

[ ] Nitric acid

[ ] Chlorine and Sodium hydroxide

[ ] Carbon black

[ ] Soda Ash

[ ] Titanium dioxide

[ ] Hydrogen

[ ] Oxygen
[ ] Other industrial gasses

Other chemicals

[ ] Specialty chemicals
[ ] Specialty organic chemicals
[x] Other, please specify: **Rubber manufacturing**

Organizational activities: Oil and Gas

(C-OG0.7) Which part of the oil and gas value chain does your organization operate in?

[x] Upstream
[x] Midstream
[x] Downstream
[x] Chemicals

Other divisions

[x] Biofuels
[x] Grid electricity supply from gas
[ ] Grid electricity supply from coal
[x] Grid electricity supply from renewables
[x] Carbon capture and storage/utilization
[ ] Coal mining

C1 Governance

Board oversight

(C1.1) Is there board-level oversight of climate-related issues within your organization?11.1

[x] Yes

(C1.1a) Identify the position(s) of the individual(s) on the board with responsibility for climate-related issues.

Please complete the following table.

Position of individual(s)	Please explain
Board chair	The Chairman of the Board and CEO of TotalEnergies, is responsible for climate change strategy at Company level for short, mid and long terms. The chairman of the board is the highest level of the organization, and Company strategy is most significant for the success of the business, this role has therefore been assigned the oversight of these most critical responsibilities, whereby climate-related issues are fully integrated into. In 2016, TotalEnergies' CEO took a decisive step by announcing the creation of a combined Strategy & Climate department in order for climate, a global concern, to be fully integrated into the Company's overarching strategy. The Chairman ensures that the board is informed of the market developments, the competitive environment and the main challenges facing the company, including climate change. Climate change is at the heart of the Company's strategic vision. TotalEnergies positions itself on high-growth low-carbon markets and intends to offer customers an energy mix with a carbon intensity that shall gradually decrease. To accompany these changes, in 2018, TotalEnergies' CEO introduced a carbon intensity indicator for the energy products used by its customers, covering scope 1, 2 and 3. In 2019, TotalEnergies' CEO announced an absolute scope 1 and 2 emissions reduction target for the Company operated oil & gas facilities. In 2020, TotalEnergies' CEO and board of Directors reviewed the Company ambition in the fight against climate change and decided to take additional steps towards the Paris goals, with the ambition for TotalEnergies to get to Net Zero by 2050 together with society, for its global business across its production and energy products used by its customers (scope 1+2+3).This ambition was jointly prepared with several institutional Investors as participants in Climate Action 100+.
Director on Board	The Board of Directors is a collegial body that determines the strategic direction of the Company and supervises the implementation of this vision. With the exception of the powers and authority expressly reserved for shareholders and within the limits of the Company's legal purpose, the Board may address any issue related to the Company's operation and make any decision concerning the matters falling within its purview. TotalEnergies' Board of Directors ensures that climate-related issues are incorporated into the Company's strategy. Since 2008, these major issues for the Company have no longer been treated as one component of environmental risks, but rather on an independent basis. The Board of Directors examines the Company's GHG emissions reduction targets and reviews its performance on an annual basis. The Lead Independent Director ensures efficient governance of the Company in accordance with current practice and is the Chairwoman of the Governance and Ethics Committee, member of the Compensation Committee and member of the Strategic & CSR Committee. At its meeting on May 4, 2020, the Board of Directors approved the Company's new Climate ambition to get to net zero carbon emissions by 2050 together with society and determined the

Position of individual(s)	Please explain
	relevant steps and targets for reducing the Company's greenhouse gas emissions (GHG). These targets were supplemented in September 2020 with TotalEnergies' announcement of absolute targets for cutting Scope 3 emissions, with the aim of reducing Scope 3 emissions in Europe by 30% by 2030 compared to 2015, in absolute terms, and a commitment to reduce the level of Scope 3 emissions worldwide by 2030 relative to 2015, despite growth in energy demand from its customers during the decade to come.

(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 • Monitoring implementation and performance of objectives • Overseeing major capital expenditures, acquisitions and divestitures • Monitoring and overseeing progress against goals and targets for addressing climate-related issues	**Reviewing and guiding strategy, Reviewing and guiding major plans of action, Reviewing and guiding risk management policies, Reviewing and guiding business plans, Overseeing major capital expenditures, acquisitions and divestitures:** Every year, the Board of Directors reviews the main issues related to climate change in the strategic outlook review of the Company's business segments, which are presented by the respective general management structures. In 2020, TotalEnergies' Board of Directors reviewed the Company ambition in the fight against climate change and decided to take additional steps towards the Paris goals, with a view for TotalEnergies to get to Net Zero by 2050 together with society, for its global business across its production and energy products used by its customers (scope 1+2+3). On May 2021, the Board of Directors of TotalEnergies under the chairmanship of TotalEnergies Chairman and Chief Executive Officer, submitted a Resolution on the energy transition of TotalEnergies towards Carbon Neutrality to the Annual General Meeting, planned on May 2021.The shareholders voted by a very large majority, more than 90% of the votes cast, in favor of the resolution proposed by the Board of Directors, thus supporting the strategy and the transition plan proposed by the Board of Directors. **Monitoring implementation and performance of objectives:** The Audit Committee does more specific work on the climatic and environmental reporting processes in the review of the performance indicators published by TotalEnergies in its annual reports and audited by an independent third-party organization. **Monitoring and overseeing progress against goals and targets for addressing climate-related issues**: In 2016, the Compensation Committee decided to introduce changes to the variable compensation of the Chairman and Chief Executive Officer to take better account of the achievement of Corporate Societal Responsibility (CSR) and HSE targets. The importance given to these aspects in the remuneration keeps

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
		growing, and the Compensation Committee of the Board reviews these criteria every year. In 2019, the Board decided to introduce a quantitative criterion on the reduction of greenhouse gas emissions of the Company's operated Oil & Gas facilities to the CEO and 300 executive officer remuneration and in 2021, the Board of Directors decided to introduce a new criterion to grant performance shares related to the evolution of GHG emissions related to the use by customers of energy products sold for end use (Scope 3) in Europe. The Board of Directors is fully mobilized by the Climate issue in order to support the development of TotalEnergies, and it approved the publication of the first Climate Report in March 2016. This report is updated every year. All these points of information and decisions were made during programmed Board's meetings.

CC1.2) Provide the highest-level management position(s) or committee(s) with responsibility for climate-related issues (do not include any names).

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other C-Suite Officer, please specify: President Strategy& Innovation	Both assessing and managing climate-related risks and opportunities	Annually
Risk committee	Both assessing and managing climate-related risks and opportunities	Annually
Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	Annually

(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).

TotalEnergies' Chairman and Chief Executive Officer deploys the Company's climate strategy in keeping with the long-term strategic guidelines defined by the Board of Directors. The chairman of the board is the highest level of the organization, and Company strategy is most significant for the success of the business, this role has therefore been assigned the oversight of these most critical responsibilities, whereby climate-related issues are fully integrated into. In 2016, TotalEnergies' CEO took a decisive step by announcing the creation of a combined Strategy & Climate department in order for climate, a global concern, to be fully integrated into the Company's overarching strategy. The Charmain and CEO ensures that the board is informed of the market developments, the competitive environment and the main challenges facing the company, including climate change. The board of Directors examines climate change risks and opportunities during the strategic outlook review of the Company's business segments. In 2020, TotalEnergies' Chairman and CEO, and board of Directors reviewed the achievements and ambitions of the Company in the fight against climate change and decided to take additional steps towards the Paris goals, with the ambition to get to Net Zero by 2050 together with society, for its global business across its production and energy products used by its customers (scope 1+2+3).This ambition was jointly prepared with several institutional Investors

as participants in Climate Action 100+. In June 2021, at the annual Shareholders' Meeting, shareholders approved almost unanimously the resolution to change the Company's name from Total to TotalEnergies, thereby anchoring its strategic transformation into a broad energy company in its identity.

General Management calls on the President Strategy & Innovation, who sits on TotalEnergies' Executive Committee and the President Strategy & Climate. The President Strategy & Climate is the highest-ranking person in the organization with a day-to-day responsibility for issues related to climate change. In particular, this includes the development of the climate road map for the Company, its implementation and the definition of greenhouse targets and ambitions. The President Strategy & Climate reports directly to the President Strategy & Innovation.

The Executive Committee relies on the work done by the Company Risk Management Committee to have a map of the climate-related risks to which the Company is exposed, and to make sure that the risk management measures in place are efficient. Since 2006, the Company Risk Management Committee is chaired by a member of the Executive Committee, the Company's Chief Financial Officer, and includes the Senior Vice Presidents of the corporate functions together with the chief administrative officers or chief financial officers of the business segments. The Chief Financial Officer attends all meetings of the Board of Directors' Audit Committee, thus strengthening the link between the Company Risk Management and the Audit Committee. Moreover, the Risk Committee (CORISK) assesses investment projects, the risks and the corresponding climate-related issues (flaring, greenhouse gas emissions, sensitivity to CO_2 prices) before they are presented to the Executive Committee. Monitoring processes are implemented at different levels of the Company's organisation.

Finally, the Climate Vice President chairs the Climate-Energy steering committee, which includes cross-cutting corporate functions and representatives of Strategy and HSE management from the various business segments. The mission of this committee consists of structuring the Company's approach to the climate, and in particular of:

- proposing targets for reducing greenhouse gas emissions for the Company's operations;
- proposing a strategy to reduce the carbon intensity of the energy products used by the Company's customers;
- monitoring existing or emerging CO2 markets; and
- driving new technology initiatives, in particular with industrial partners, to reduce CO2 emissions (energy efficiency, CO2 capture and storage, for example).

Employee incentives

(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
Yes	The Board of Directors' strong focus on climate issues is reflected, among other things, in changes in the Chairman and CEO's compensation. Since 2013, a CSR performance criterion has been added for the attribution of the CEO's variable remuneration. The CSR performance is based on the achievement of targets for carbon emissions, energy efficiency, TotalEnergies' position in the rankings published by ESG rating agencies, the integration of climate into the Company's strategy as well as CSR reputation. In 2019 a quantitative criterion on the reduction of greenhouse gas emissions of the Company's operated Oil & Gas facilities has been added to the CEO and 300 executive officers' remuneration. From 2021, a new criterion regarding the reduction in indirect (Scope 3) emissions related to the use of the Company's energy products by its customers in Europe was introduced for the allocation of performance shares to the Chairman and Chief Executive Officer and to all Senior Executives.

(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	Types of incentive	Activity incentivized	Comment
Board Chair	Monetary reward	Emissions reduction target	Board Chairman and CEO: In 2013, the Board of Directors of TotalEnergies decided to add a criterion for the attribution of the CEO's variable remuneration portion, based on the Corporate Social Responsibility (CSR) performance for the determination of the personal contribution made by the CEO. In 2015, the portion relating to the HSE/CSR performance criteria was set at a maximum of 16% of CEO's base salary. In 2016-2017, this HSE/CSR performance portion increased to 30%, with 20% tied to safety performance and 10% to CSR performance. In 2018, CSR performance portion raised from 10% to 15%. The CSR performance is based on the achievement of targets for carbon emissions, energy efficiency, TotalEnergies' position in the rankings published by non-financial rating agencies, the integration of climate into the Company's strategy as well as the reputation in the domain of CSR. In 2019, the Board decided to introduce a quantitative criterion on the reduction of greenhouse gas emissions of the Company's operated Oil & Gas facilities to the CEO and 300 executive officers remuneration, given the stated objective of reducing them from 46 Mt CO_2e in 2015 to less than 40 Mt CO_2e in 2025. The maximum weighting of this criterion is 10% of the CEO's base salary (see TotalEnergies' 2020 Universal Registration Document, p. 184-202). From 2021, a new criterion regarding the reduction in indirect (Scope 3) emissions related to the use of the Company's energy products by its customers in Europe was introduced for the allocation of performance shares to the Chairman and Chief Executive Officer and to all Senior Executives. Executive officers are generally incentivized on their ability to communicate on climate change issues, whereas business unit managers and facility managers are incentivized on the achievement to meet emission reduction targets.
Board / Executive Board	Non-monetary reward	Emissions reduction target	
Corporate executive team	Monetary reward	Emissions reduction target	
Chief Financial Officer (CFO)	Monetary reward	Emissions reduction target	
Executive officer	Monetary reward	Emissions reduction target	
Business unit manager	Monetary reward	Emissions reduction target	TotalEnergies' remuneration system for management and senior executives comprises a variable component, which is linked to individual performance and the achievement of individually agreed performance targets. Depending on the responsibilities, individual targets of TotalEnergies management relate to environmental or climate related issues (e.g. refinery and plant managers). Employee performance is assessed in a compulsory annual appraisal review.
Facilities manager	Monetary reward	Energy reduction target	

Entitled to incentive	Types of incentive	Activity incentivized	Comment
Environment / Sustainability manager	Monetary reward	Emissions reduction target	TotalEnergies' HSE performance recognition policy is used by TotalEnergies managers throughout the Company. This HSE performance recognition policy was designed to drive improvement in three areas: • How management exercises its HSE responsibilities. • How individual performance is rewarded and/or sanctioned. • How collective performance is rewarded. Managers are assessed on the basis of the specific KPIs (Key Performance Indicators) pertaining to their function and business unit or corporate department. Attainment of GHG emissions reduction targets is part of the KPIs for senior managers with relevant responsibility in that area.

C2 Risks and opportunities

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

[x] Yes

Time horizons

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

Time horizon	From (years)	To (years)	Comment
Short-term	**0** (N.B. = 2020)	**2** (N.B. = 2022)	Excerpt of TotalEnergies' 2020 Universal Registration Document (p. 248): the risks and opportunities related to climate change are analysed according to different timescales: short term (two years), medium term (until 2030) and long term (beyond 2030).
Medium-term	**2** (N.B. = 2022)	**10** (N.B. = 2030)	Excerpt of TotalEnergies' 2020 Universal Registration Document (p. 248): the risks and opportunities related to climate change are analysed according to different timescales: short term (two years), medium term (until 2030) and long term (beyond 2030).
!Long-term	**11** (N.B. = 2031)	**30** (N.B. = 2050)	Excerpt of TotalEnergies' 2020 Universal Registration Document (p. 248): the risks and opportunities related to climate change are analysed according to different timescales: short term (two years), medium term (until 2030) and long term (beyond 2030).

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

The Company implements a risk-management system that is an essential factor in the deployment of its strategy. This system relies on a continuous process, at company and asset level, of identifying and analysing risks in order to determine those that could prevent the attainment of TotalEnergies' objectives.

Climate risks are assessed in the same manner as other types of risk, by considering their materiality in terms of substantive financial impact, reputational impact, physical impact, legal impact etc. The Company risk mapping was updated in 2019. The risk materiality (severity) is assessed according to their probability of occurrence i.e. the probability of occurrence of the risk over time, their level of impact i.e. the effect produced by the risk for the perimeter/area under consideration and the level of control of this risk, i.e. the ability to detect, prevent and mitigate the risk. The impact level assessment is performed according to various financial, strategic, environmental, image/reputation, legal, human and HR criteria, and is based on different levels. The assessment of the level of materiality may be changed at any time, in particular should new facts, whether external or specific to the Company, come to light. The materiality rating scale (impact level and probability of occurrence) is from 1 i.e. less material to 4 i.e. more material.

The substantive financial impact is evaluated as a percentage of the Net Operating Income at the concerned perimeter and the strategic impact is assessed according to the Company's ability to be recognized as the responsible energy major.

Any investment, sale or financial commitment is subject to different levels of decision-making based on financial thresholds. Substantive change is defined as the amount of CAPEX involved in the particular project under analysis, based on "financial significance" thresholds, risks will be assessed through different processes and undergo different levels of validation, these thresholds are segment specific. In its decision-making process, the risks and associated climate issues (flaring, greenhouse gas emissions, CO_2 price sensitivity) are assessed prior to the presentation of the new projects (both upstream and downstream) to the Executive Committee, For each new project, the criteria for determining materiality are defined in the "Corisk" checklist, which needs to be completed before submission to the Risk Committee, prior to the presentation to / approval by the Executive Committee. The risks and impact assessments are real, potential, direct, indirect or induced, and the impacts severity is assessed on 4 levels from low, moderate, high to very high. Priorities are defined by the Executive Committee depending on the importance of the project, based on several parameters (e.g. geopolitical situation or risks in the country, oil price, gas price, forecast of the price evolution,). All these parameters are analysed and updated each year in the long-term plan documents (10-year forecast) prepared by each operational entity within the Company.

Each material investment project, including in the exploration, acquisition and development of oil and gas resources as well as other energy sources and technologies, is assessed for consistency with the goals of the Paris Agreement, using the following criteria:

- The economics of the project are analyzed in a hydrocarbon price scenario compatible with the goals of the Paris Agreement (Brent at $50/b according to the IEA SDS scenario and Henry Hub at $2.5/Mbtu), also considering a CO_2 price of $40/t. A sensitivity analysis is performed with a CO_2 price of $100/t as of 2030.
- For oil and gas projects, the GHG emissions intensity (Scopes 1 & 2) of sanctioned projects is compared, depending on their nature, to the average GHG emissions intensity of the assets of upstream production or those of various downstream units (LNG plants, refining, petrochemicals). The objective is for new investments to contribute to reducing the Company's average GHG emissions intensity (Scopes 1 & 2) in their category.
- For projects related to other energies and technologies (biofuels, bigas, CCS, etc.), GHG emission reductions are assessed for their contribution to the Company's emissions reduction.

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

Please complete the following table.

Value chain stage(s) covered	Risk management process	Frequency of assessment	Time horizon(s) covered	Description of process
• Direct operations • Upstream • Downstream	Integrated into multi-disciplinary company-wide risk management process	More than once a year	• Short-term • Medium-term • Long-term	The identification of climate-related risks forms an integral part of the analysis of investment projects. The impact of these risks is also examined for TotalEnergies asset portfolio as a whole. Climate change also provides TotalEnergies with opportunities (demand for electricity, contribution of renewables and gas to the production of electricity, CO_2 capture and storage technology (CCS), helping customers to reduce their energy consumption and environmental, etc). Impact of climate-related risks and opportunities is at the heart of the Company's strategic vision. The Company Management Risk Committee (GRMC) meets six times a year. At each meeting, the participants share any potential risks they have identified and presentations are given on one or more risk-related topics, during which the members of the GRMC are invited to cast a critical eye over the subject, question the work done and, if applicable, provide additional information or clarification in order to enhance the understanding of the risk and improve the risk management systems. Its objective is a better integration of risk management through a coordinated approach, and to: • identify cross-functional or emerging risks – including climate risks, both mitigation and adaptation - and assess residual risks on existing processes and, when appropriate, elaborate proposals for additional processes so that they stand at levels deemed acceptable, risk are assessed from low risk to very high risk, based on the potential consequences and timeframes; • ensure that risks and relevant processes for addressing them are effectively handled by managers appointed within the organization; • approve the corporate communication plan concerning the global risk management framework - including climate related risks - and its further development. The Board of TotalEnergies has reassessed the importance of climate change in the Company's strategy. From 2008, climate issues were treated as completely separate from environmental risks, and are fully integrated into the Company's business and strategic vision. TotalEnergies' processes cover in particular transitional and physical risks. The Company Risk Management Committee uses the Company risk mapping work, updated in 2019. The risks' materiality (severity) are assessed according to their probability of occurrence and their level of impact. The impact level assessment is performed according to various financial, strategic, environmental, image/reputation, legal, human and HR criteria. In each category, the risks considered as being the most material, in line with the assessment based on the above criteria, are presented. The assessment by TotalEnergies of this level of materiality may be changed at any time, in particular should new facts, whether external or specific to the Company, come to light. The Materiality rating scale (impact level and probability of occurrence) is from 1 i.e. less material to 4 i.e. more material.

Value chain stage(s) covered	Risk management process	Frequency of assessment	Time horizon(s) covered	Description of process
				In 2019, the Climate challenges related to transitional and physical risks were assessed with the following materiality: Deployment of the energy transition with materiality 3, Development of oil and gas reserves with materiality 3, Operating and financial risks relating to the effects of climate change with materiality 2, Reputational risk and management of talents with materiality 2. **Assessment of transition risks:** The Risk Committee assesses investment projects, risks and corresponding climate-related issues before they are presented to the Executive Committee. Each material investment project, including in the exploration, acquisition and development of oil and gas resources as well as other energy sources and technologies, is assessed for consistency with the goals of the Paris Agreement, using the following criteria: • The economics of the project are analyzed in a hydrocarbon price scenario compatible with the goals of the Paris Agreement (Brent at $50/b according to the IEA SDS scenario and Henry Hub at $2.5/Mbtu), also considering a CO_2 price of $40/t. A sensitivity analysis is performed with a CO_2 price of $100/t as of 2030. • For oil and gas projects, the GHG emissions intensity (Scopes 1 & 2) of sanctioned projects is compared, depending on their nature, to the average GHG emissions intensity of the assets of upstream production or those of various downstream units (LNG plants, refining, petrochemicals). The objective is for new investments to contribute to reducing the Company's average GHG emissions intensity (Scopes 1 & 2) in their category. • For projects related to other energies and technologies (biofuels, bigas, CCS, etc.), GHG emission reductions are assessed for their contribution to the Company's emissions reduction In 2020, 8 significant investments (Absheron – Azerbaidjan, Mero-3 –Brazil, Tilenga/EACOP – Ouganda, Grandpuits – France, Port Arthur condensate splitter – United States, Energia Costa Azul – Mexico, Northern Lights – Norway, Fonroche Biogaz – France) were evaluated according to these criteria: • the sanctioned projects have a profitability above the internally defined threshold, in a scenario compatible with the goals of the Paris Agreement, with the exception of the Northern Lights project, which in its initial phase requires a carbon price above $100/t CO2, its profitability being satisfactory in the subsequent expansion phases that will allow for larger volumes to be stored for low marginal investments. • the GHG emissions intensity (Scopes 1 & 2) of upstream and downstream oil and gas projects is below the average intensity for their category, with some Upstream projects having an emissions intensity that increases over time as production declines, which will require additional emissions control measures. **Assessment of physical risks:** The Company assesses the vulnerability of its facilities to climate hazards so that the consequences do not affect the integrity of the facilities, or the safety of people. More generally, natural hazards (climate-related risks as well as seismic, tsunami, soil strength and other risks) are taken into account in the construction of industrial facilities, which are designed to withstand both normal and extreme conditions. The Company's internal procedures specifically call for the systematic assessment of the possible repercussions of climate change on our future projects (Physicals risks). In-depth studies are carried out when the potential risk is significant relative to the existing safety margin and include a review by type of risk (e.g., sea level, storms,

Value chain stage(s) covered	Risk management process	Frequency of assessment	Time horizon(s) covered	Description of process
				temperature, permafrost) and take into account the lifespan of the projects and their capacity to gradually adapt.This physical risk is continually assessed in the risk management and prevention plans. These internal studies have not identified any facilities that cannot withstand the consequences of climate change known.

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

Risk type	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	TotalEnergies' main emitting sites located in Europe are complying with the European carbon market (EU-ETS). The risk for TotalEnergies is a loss of competitiveness on the international scale, in particular towards competitors located outside the European Union, which are not subject to similar regulation. Twice a year (Budget and Long-Term Plan), the CO_2 price impact is presented to the Executive Committee and associated mitigations measures are identified. The market's evolution is continuously monitored and is included into the TotalEnergies risk management process at Company level with the Company Management Committee (GRMC) and at asset level with the Risk Committee. The Risk Committee (CORISK) assesses investment projects, the risks and the corresponding climate-related issues including the sensitivity to CO_2 prices before they are presented to the Executive Committee
Emerging regulation	Relevant, always included	More and more countries are likely to adopt carbon taxes to accelerate the low carbon transition, which could have an impact on the TotalEnergies' activities and financial situation (loss of competitiveness, increase of operational cost) TotalEnergies applies an internal CO_2 price of $40 per ton (depending on the price of crude oil), or the actual price of CO_2 in a given country if higher when evaluating its investments, with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios. The Risk Committee (CORISK) assesses investment projects, the risks and the corresponding climate-related issues including the sensitivity to CO_2 prices before they are presented to the Executive Committee. TotalEnergies anticipates participating in trading schemes in the coming years i.e. in China, USA, Canada, Kazakhstan, Mexico, depending on emerging regulatory issues.
Technology	Relevant, always included	Because of the effects of global warming, many countries will increasingly be looking to develop alternative energy sources, or technologies which enable alternative energy sources development, such as renewable energy sources, energy storage solutions, etc. with a risk of technological breakthrough and emergence of a new competitive environment which could have an impact on TotalEnergies markets and revenue. This risk is assessed by the Company Risk Management Committee and monitored by the concerned business units (Integrated Gas Power and Renewables, R&D and Innovation, Marketing and Services, Refining and Chemicals, etc.).
Legal	Relevant, always included	Since 2016, there has been some legal cases involving oil and gas companies: some cases argue that some oil industry or other major fossil fuel producers should be held accountable for climate impacts. Other cases involve cities or local governments asking O&G companies to pay a fair share of their local climate change costs. A dedicated team within the corporate Legal department is in charge of following environmental and climate change related risks.

Risk type	Relevance & inclusion	Please explain
Market	Relevant, always included	If the world is to have a chance of not exceeding global warming of 2°C, a carbon budget should not be exceeded. This has led some analysts to consider that coal and a part of the oil and gas reserves of publicly listed companies are 'unburnable' – the so-called stranded assets. TotalEnergies applies an internal CO_2 price of $40 per ton or the actual price of CO_2 in a given country if higher when evaluating its investments, with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios. The Risk Committee (CORISK) assesses investment projects, the risks and the corresponding climate-related issues including the sensitivity to CO_2 prices before they are presented to the Executive Committee.
Reputation	Relevant, always included	Operational accidents in the oil and gas sector may cause the release of high quantities of pollutants / GHG emissions. The degraded reputation may result in a lack of confidence from investors and/or poor acceptability from stakeholders. A similar situation in terms of reputation may result from a slow reaction of the company to the energy transition. This risk is assessed at Corporate level by the Company Management Risk Committee. The Risk Committee (CORISK) assesses investment projects, the risks and the corresponding climate-related issues and CSR including the reputational and acceptability risk.
Acute physical	Relevant, always included	The effect of extreme events due to climate change may impact the robustness of our infrastructures or surrounding environment. In addition to assessing the vulnerability of Oil and Gas existing facilities, there is also a need to assess the vulnerability of nearby infrastructures (such as access roads), of surrounding populations (which include companies' employees) etc. An example is the effect of severe flooding in Houston, TX. in 2017. Our internal procedures specifically call for the systematic assessment of the possible repercussions of climate change on our future projects. In-depth studies are carried out when the potential risk is significant relative to the existing safety margin. Our analyses include a review by type of risk - sea level, storms, temperature change and melting permafrost, among others. This risk is continually assessed in the risk management and prevention plans.
Chronic physical	Relevant, always included	The effect of slowly changing physical parameters (such as ambient temperature) due to climate change may impact the longer-term robustness of our infrastructures or surrounding environment. For instance, when it comes to the use of cooling water for process systems. This risk is assessed at Corporate level by the Company Management Risk Committee, and by the Corisk and continually monitored in the risk management and prevention plans.

Risk disclosure

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

[x] Yes

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

Iden-tifier	Where in the value chain does the risk driver occur?	Risk type	Primary climate-related risk driver	Primary potential financial impact	Company- specific description	Time horizon	Likelihood
Risk 1	Direct operations	Market	Other: Policy and legal: Mandates on and regulation of existing products and services	Other: Write-offs, asset impairment, and early retirement of existing assets due to policy changes	Some investors may divest from TotalEnergies if they consider that some of our assets are stranded. For instance, those with high carbon intensities (Oil sands, etc.). Indeed, the UNFCCC Paris Agreement has set a clear 2°C objective for the world and has engaged countries to take action in order to reach this objective. If the world is to have a chance of not exceeding global warming of 2°C, a carbon budget should not be exceeded. This has led some analysts to consider that coal, oil and gas reserves of publicly listed companies are 'unburnable' – the so-called stranded assets. In Canada, TotalEnergies holds a 24.58% stake in Fort Hills and a 50% stake in Surmont SAGD oil sands project.	Short-term	Likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium- Low	Yes, a single figure estimate	less than10 billion USD		

Explanation of financial impact figure	Cost of response to risk	Description of response and explanation of cost calculation	Comment
To ensure the viability of TotalEnergies' projects and our long-term strategy with regard to climate change issues, TotalEnergies applies an internal CO_2 price of $40 per ton, or the actual price of CO_2 in a given country if higher when evaluating our investments. with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios. This is consistent with TotalEnergies' support for mechanisms to replace coal with gas in power generation and our investment in R&D on low-carbon technologies. A global carbon price would have some impact on the overall financial situation of TotalEnergies: in 2020 studies have shown that a long-term CO_2 price of USD 40 per ton (or the current price if higher in a given country) applied worldwide would have an impact of around 6% on TotalEnergies' discounted present value (upstream and downstream assets), i.e less than	2 MUSD	In 2016, the Chairman of the Board and CEO of TotalEnergies, took a decisive step by creating a combined Strategy & Climate department, in order for climate, a global concern, to be fully integrated into the Company's overarching strategy. 1. The management method by TotalEnergies' Board is clearly set: Divestment from assets which are no longer consistent with this strategy. An example is that, following completion of the sale in 2015 of its subsidiary TotalEnergies Coal South Africa, the Company ceased its coal production activities. In addition, in 2016 the Company ended its coal trading activities. Similarly, the Company has also decided to retrieve from the CTO project (Coal To Olefins) in China in August 2016. TotalEnergies has reviewed its oil assets that can be qualified as "stranded", meaning with reserves beyond 20 years and high production costs, whose overall reserves may therefore not be produced by 2050. The only projects concerned are the Fort Hills and Surmont oil sands projects. In addition, TotalEnergies has announced that it will not approve any new projects to increase capacity on the Canadian oil sands assets. in 2018 the Company sold	

10 GUSD. TotalEnergies' portfolio can therefore be considered resilient under such a scenario.		its interests in the Joslyn oil sands project. It also disposed of 1.47% of its stake in the Fort Hills oil sands mining extraction project in Canada. 2. Selection of new oil and gas projects by focusing on low breakeven costs. 3. Focus more on gas than on oil. 4. Development of CCS. Another case study: TotalEnergies continues to increase its presence in the renewable sector and low carbon sector. In 2016, TotalEnergies acquired Saft (battery)+ Lampiris + creation of Total Solar. In 2017, it entered the capital of Eren RE and Direct Energy (Electricity) and in 2021 it entered in Foronche (Biogas). In 2020, gross production installed capacity of renewable totalled 7 GW, compared with 3 GW in 2019 and less than 1 GW in 2017 To take care of these topics: cost estimated at 2 MUSD which represents 8 FTEs of the Climate team + preparation / participation of business segments to Board meetings, "Corisk" meetings, and Climate-Energy Steering Committee meetings.	

Iden-tifier	Where in the value chain does the risk driver occur?	Risk type	Primary climate-related risk driver	Primary potential financial impact	Company- specific description	Time horizon	Likelihood
Risk 2	Direct operations	Emerging regulation	Carbon pricing mechanisms	Increased (indirect) operating costs	More and more countries are likely to adopt carbon taxes to accelerate the low carbon transition, which could have an impact on TotalEnergies' activities with a loss of competitiveness and an increase of operational costs. TotalEnergies anticipates participating in trading schemes other than the EU ETS in the coming years (in China, USA, Canada, Kazakhstan, Mexico), depending on emerging regulatory issues. In 2019, South Africa introduced a new carbon tax (8 USD per ton of CO_2). The rate will be reviewed in phase 2 (2023-30). TotalEnergies is present in South Africa and has developed oil and gas exploration activities in the Outeniqua basin with operating interests in two blocks, 11B / 12B and South Outeniqua. Since January 1, 2020, the Company has been taking into account in the economic evaluations of investments submitted to the Executive Committee a CO2 price of $40/t with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios.	Medium-term	Likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium-High	Yes, a single figure estimate	10 billion USD		

Explanation of financial impact	Cost of response to risk	Description of response and explanation of cost calculation	Comment
The price on carbon has some impact on the overall financial situation of TotalEnergies: studies have shown that	1 MUSD	TotalEnergies takes into account in the economic evaluations of investments submitted to the Executive Committee a CO2 price of $40/t with a sensitivity of $100/t as from 2030, independent of the Brent price	

a long-term CO_2 price of USD 40 per ton (effective from 2021, or the current price if higher in a given country) applied worldwide would have an impact of around 6% on TotalEnergies' discounted net present value (upstream and downstream assets), i.e.less than 10 GUSD. TotalEnergies' portfolio can therefore be considered resilient under such a scenario.		scenarios. This is consistent with our support for mechanisms to replace coal with gas in power generation and our investment in R&D on low-carbon technologies. TotalEnergies is part of the World Bank Carbon Pricing Leadership Coalition (CPLC) which helps anticipating these changes. Case study: with the implementation of the Kazakhstan ETS in 2014, TotalEnergies E&P Kazakhstan stress-tested against the potential future CO_2 costs by evaluating the impact on the Net Positive Value of CO_2 prices of 30 to 40 USD per ton. This was integrated in the assessment of the activities of TotalEnergies in Kazakhstan, and the assets is part of the overall TotalEnergies GHG emissions reduction projects To take care of these topics: cost estimated at 0.5 MUSD to 1 MUSD (which represents 3 FTEs of resources dedicated to carbon pricing mechanisms + support to the Climate Economy Chair, an academic initiative).	

Iden-tifier	Where in the value chain does the risk driver occur?	Risk type	Primary climate-related risk driver	Primary potential financial impact	Company- specific description	Time horizon	Likelihood
Risk 3	Direct operations	Current regulation	Other: Policy and legal: Increased pricing of GHG emissions	Increased (indirect) operating costs	The financial risk related to the foreseeable purchase of CO_2 emission allowances on the market is expected to rise due to the effects of the ongoing reform of the EU-ETS TotalEnergies' main emitting sites located in Europe are complying with the European carbon market (EU-ETS). The risk for TotalEnergies is a loss of competitiveness on the international scale, in particular towards competitors located outside the European Union, which are not subject to similar regulation. The implementation of the Market Stability Reserve which came into effect in 2019, will reduce the amount of auctioned quotas in an attempt from the European Commission to drive the EU-ETS price up.Based on available information, the Company estimates that around 25% of emissions subjected to EU-ETS are not covered by free quotas in the period 2013-2020 and up to 30% or more from 2021 to 2030. 64% of TotalEnergies scope 1 emissions in 2020 are from assets located in Europe, and amounted to 25 Mt CO_2 equivalent, 30% of those emissions could be then not covered by free quotas (7 Mt CO_2 equivalent).	Medium-term	Likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium-High	Yes, a single figure estimate	210 MUSD		

Explanation of financial impact	Cost of response to risk	Description of response and explanation of cost calculation	Comment
Based on available information, the Company estimates that around 25% of emissions subjected to EU-ETS are not covered by free quotas in the period	1 MUSD	Related investments made in installations (in particular in refineries and petrochemical plants in Europe) to mitigate our exposure risk, by advancing new technologies to limit GHG emissions through the improvement of energy efficiency, with clear ambition set for the Company (-1% per year). TotalEnergies uses the most appropriate architectures and equipment and introduces	

2013-2020 and up to 30% or more from 2021 to 2030. At the end of 2020, the price of these quotas was around €25/t, and the EU ETS average price in 2020 was $30/t. The potential financial impact is around 210 MUSD (i.e. 30% of TotalEnergies' Scope 1 emissions in Europe * 30 USD).		technological innovations. For example, on offshore production barges, offshore platforms and onshore facilities, heat recovery systems at gas turbine exhausts have been implemented thereby avoiding the need for furnaces or boiler systems. The use of energy savings certificates in Europe (fuel sales). The use of a shadow price in all our investment decisions to ensure the viability of our project and the resilience of our assets even in a CO2 priced environment. Between 2008 and 2015 this shadow price was based on a cost of 25€ per ton of CO2 emitted. As of 2016, this shadow price was from 30 to 40 USD per ton of CO2 emitted depending on the oil price scenario retained, or the actual price if it is higher in a given country. From the 1st of January 2020, TotalEnergies applies an internal CO2 price of 40 USD per ton, or the actual price if it is higher in a given country, with a sensitivity of 100 USD as from 2030 independent of the Brent prices scenarios. Compliance with the EU ETS, through a close monitoring of positions, improvement projects and, when necessary, market transactions. To take care of these topics: cost estimated at 0.5 MUSD to 1 MUSD (which represents 3 FTEs of resources dedicated to carbon pricing mechanisms + support to the Climate Economy Chair, an academic initiative).	

Iden-tifier	Where in the value chain does the risk driver occur?	Risk type	Primary climate-related risk driver	Primary potential financial impact	Company- specific description	Time horizon	Likelihood
Risk 4	Direct operations	Chronic physical	Changes in precipitation patterns and extreme variability in weather patterns	Decreased revenues due to reduced production capacity	The tendency observed in recent years shows that hurricanes tend to become stronger than in the past. This could have an impact on the continuity of TotalEnergies' operations, especially in Exploration and Production, and Refining and Petrochemicals, in particular in cyclone-prone areas. These physical risks could affect TotalEnergies' business and value chain in the following way: • The utilization rate of the production capacity could be less than expected in the event of major physical incident. • The other consequences would be the repair costs to restore a normal situation and resume production, and a loss of revenue during the downtime. Geographical areas considered as highly exposed to hurricanes are the Gulf of Mexico and South-East Asia. In the USA, TotalEnergies operates a refinery and a chemical plant in Port Arthur, Texas, and has some petrochemical plants in Texas, which represents approximatively 15% of the Company's refinery throughput (100% operated).	Medium-term	Very likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium-Low	Yes, a single figure estimate	30 million USD		

Explanation of financial impact	Cost of response to risk	Description of response and explanation of cost calculation	Comment
For TotalEnergies, the financial implications are generally estimated on the basis of a number of days of lost production on a site and the corresponding loss of revenue (products not sold to customers during the downtime). For example, in average, a production stop of one month of a refinery would represent an operational loss of about 30 MUSD (one month corresponds to the average production stop faced during the last hurricanes in the USA). The potential financial implications of physical risks are limited when considering our global activities in 130 countries, so any weather-related event in a given country would only affect a small proportion of our activities at a given time. Given their locations, E&P production sites operated by TotalEnergies have so far suffered relatively limited exposure to extreme weather events. Geographical areas considered as highly exposed to hurricanes are the Gulf of Mexico and South-East Asia.	1 MUSD	TotalEnergies has implemented an active process in order to regularly conduct vulnerability studies of our facilities, and our internal procedures specifically call for the systematic assessment of the possible repercussions of climate change on future projects. In-depth studies are carried out when the potential risk is significant relative to the existing safety margin. Our analyses take into account the life span of our projects and their capacity to gradually adapt. To date, these studies have not identified any facilities that cannot withstand the consequences of climate change. For instance, in Russia, the effect of climate change on the permafrost has been accounted for in the design of Yamal LNG in 2013. Yamal LNG is one of the largest and most complex LNG projects in the world, which is operated by the Yamal LNG Company, owned by Novatek, TotalEnergies, CNPC and Silk Road Fund. Gas export began in 2017. A total of 65,000 temperature-controlled piles driven to 10 to 28 meters deep have been installed to guarantee the stability of the heaviest structures and equipment and a total of 28,000 thermosyphon systems (a cooling device that lowers the temperature of the soil) have been positioned on the primary piles in order to maintains a temperature that guarantees the full bearing capacity of the piles for the plant's operating lifetime. For Upstream activities in particular, there is a dedicated team, coordinating specific studies for all assets: the annual cost (FTE + external studies) is approximately 1 MUSD excluding additional costs potentially due to specific site surveys. Dealing with physical risks attached to new projects in more exposed areas is integrated into the engineering and economic characteristics of the projects.	

Opportunity disclosure

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

[x] Yes

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

Identifier	Where in the value chain does the opportunity occur?	Opportunity type	Primary climate-related opportunity	Primary potential financial impact	Company-specific description	Time horizon	Likelihood
Opp1	Direct operations	Products and services	Development and/or expansion of low emission goods and services.	Increased revenue resulting from increased demand for products and services	As the worldwide demand for electricity is expected to grow strongly in the coming decades (~2% CAGR over 2015-40, source IEA), TotalEnergies intends to become a major player in low-carbon electricity. Since the early 2000s, TotalEnergies has developed along the whole of the low-carbon electricity value chain, from electricity generation, storage and sale to the end customer in Asia-Pacific, Africa and Latin America. The Company has a diversified portfolio of assets in wind, solar and hydro. TotalEnergies is as well a leader of French and Belgian low carbon electricity distribution market with 143 Twh in 2020 (gas and renewables) and had an installed capacity of 3.6 GW of low-carbon electricity generation from gas.	Short-term	Very likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium	Yes, a single figure estimate	7 billion USD		

Explanation of financial impact	Cost to realize opportunity	Strategy to realize opportunity and explanation of cost calculation	Comment
Renewable energies will gradually increase in TotalEnergies' portfolio. Low carbon electricity could represent 40% of TotalEnergies' mix by 2050. Sales could double in 2030 and represent around 7 billion USD in 2030.	3 billion USD / year	Since 2015, TotalEnergies has allocated more than 10% of its investment to renewables and electricity (1.5 billion USD per year) and it plans to increase this to more than 20% a year between 2021 and 2025 (more than 3 billion USD per year) . The Company confirms its objective to invest in order to have a gross power generation capacity from renewables of 35 GW in 2025 and will continue its development to become a major international player in renewable energies with the ambition to have developed a gross capacity of 100 GW by 2030. At year-end 2020, gross production installed capacity of renewable electricity totaled 7 GW. TotalEnergies renewables (ex Eren and Quadran) (2018) enable the Company to boost its development in solar, wind power, hydraulic and biogas. As of December 31, 2020, TotalEnergies renewables operated a portfolio of more than 250 onshore wind, solar, hydroelectric and biogas assets in France, and continues to develop a portfolio of renewable electricity projects at various stages of maturity. Its gross installed generation capacity rose to 1 GW at year-end 2020 compared to 0.8 GW at year-end 2019 and 0.7 GW at year-end 2018. This growth is the result of accelerated projects in 2020, with more than 5 GW of wind power projects in France, the United Kingdom and South Korea, more than 2 GW of solar power assets in operation in India, more than 5 GW of solar power projects in Spain and a giant 0.8 GW solar farm in Qatar. Assets operated or under construction worldwide represent an installed gross capacity of approximately 3.3 GW. Direct Energie (acquired in 2018 for nearly €2billion) allows the Company to accelerate its downstream integration along the full gas and power value chain and to reach critical mass in the French, Belgium and the Netherlands markets. TotalEnergies is targeting 15% market share in France and Belgium, with a 5-year horizon in the residential segment. The Company is marketing electricity in the UK, Spains, the Netherlands and Germany. The acquisition of combined-cycle gas power plants in Europe is part of the strategy to integrate the gas and	

		electricity value chain, and complements well the sources of production of intermittent renewable electricity. In France, Belgium and Spain TotalEnergies operated eight combined-cycle natural gas (CCGT) power plants. The global installed capacity is 3.56 GW as of 2020.	

Identifier	Where in the value chain does the opportunity occur?	Opportunity type	Primary climate-related opportunity	Primary potential financial impact	Company-specific description	Time horizon	Likelihood
Opp2	Direct operations	Products and services	Development and/or expansion of low emission goods and services.	Increased revenue resulting from increased demand for products and services	To respond responsibly to the strong rise in demand for electricity, TotalEnergies remains committed to gas, whose CO_2 emissions are half those of coal when used to generate electricity and strengthens its development in the natural gas value chain from production to end customers. The activities of TotalEnergies in the gas business contribute to the growth of the Company by ensuring market outlets for its current and future natural gas production. TotalEnergies' projected production and sales mix will change significantly by 2030: 50% of gas and greengas, 35% of oil and liquid biofuels, 15% of electricity, mostly renewable compared to 2019 (2019 mix 40% of gas, 55% of oil and liquid biofuels and 5% Electricity).	Short-term	Very likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium	No, we do not have this figure			

Explanation of financial impact	Cost to realize opportunity	Strategy to realize opportunity and eplanation of cost calculation	Comment
The global natural gas market forecast is expected to increase by 2%/ year, and 5%/year for LNG.	15 billion USD	TotalEnergies is a major **LNG** player in the world, and intends to develop B2B and B2C gas marketing, as well as create new LNG markets (LNG-to-Power through FSRU in emerging countries, LNG for transportation). Significant operations have taken place in the upstream and the downstream to make this possible. Upstream, TotalEnergies has finalized various acquisitions, including that of the Engie and Anadarko LNG assets in Mozambique, and has launched some major LNG projects, such as Ichthys in Australia and Cameron in the United States. In addition, the Company has proceeded with or benefited from the launch of major developments, like the Arctic LNG 2 project (2019) and the Energia Costa Azul LNG 2 porject (2020). TotalEnergies is the world's second-ranking player on this market, with a volume sold of more than 38 Mt in 2020 and its aims to increase it sales to 50 Mt per year by 2025. The growth of natural gas is expected to see a steady increase in the proportion of green gas in the existing infrastructure network, such as biogas and hydrogen, to reduce greenhouse gas emissions from the gas value chain. To step up the development of its operations, TotalEnergies created a Biogas business unit and a Hydrogen business unit in 2020. The Company's target is to produce 4 to 6 TWh of biomethane per year between now and 2030 and supply 10% of the energy requirement of its gas power plants in Europe by 2030. In January 2021, TotalEnergie announced the acquisition of Fonroche Biogaz, French market leader in biogas production.	

		In distribution, TotalEnergies has engaged itself in the business of gas fuel for transport by acquiring a 25% stake in 2018 in Clean Energy Fuels Corp., one of the leading distributors of gas fuel for HGVs in the United States, or by signing a contract with CMA-CGM, the first shipping company to equip its transcontinental container ships with LNG-powered engines. Strengthening the position of gas in the energy mix is also accompanied by a greater focus on control of methane emissions. More than 20 billion USD were dedicated between 2015 and 2020 to development of gas and LNG projects.	

Identifier	Where in the value chain does the opportunity occur?	Opportunity type	Primary climate-related opportunity	Primary potential financial impact	Company-specific description	Time horizon	Likelihood
Opp3	Direct operations	Products and services	Development and/or expansion of low emission goods and services.	Increased revenue resulting from increased demand for products and services	Once efficient mechanisms to support the development of Carbon Capture, and Storage (**CCS**) are implemented, TotalEnergies will be in a favourable position to take a significant part to this development because of its extensive knowledge on this topic. This knowledge will come from its R&D program (which will make TotalEnergies competitive), its experience in geosciences (needed for CO_2 storage), and its business development capacities. The development of CCS has been a long-standing Company commitment, in particular through its Lacq pilot project conducted from 2010 to 2016 (oxy-combustion capture and storage in a depleted reservoir). TotalEnergies is devoting 10% of its R&D investments to CCS and has initiated work alongside its peers, within the Oil & Gas Climate Initiative, on the issues of commercialization (including relations with all stakeholders: public, government), capture technologies and world storage capacities.	Medium-term	About as likely as not

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium	Yes, a single figure estimate	2.5 GUSD/year		

Explanation of financial impact	Cost to realize opportunity	Strategy to realize opportunity and eplanation of cost calculation	Comment
The CCS market is estimated to develop dramatically in the next 30-35 years, with significant worldwide CAPEX (order of magnitude over 100 GUSD per year) and OPEX. This market must first become profitable before such development. As per the IEA SDS scenario, 2.4 Gt of CO2 are projected to be captured per year starting	70 MUSD	TotalEnergies is implementing an R&D roadmap for CCS and business through a dedicated Business Unit. TotalEnergies is allocating about 60 MUSD/year of R&D spending for CCS and has about currently 20 FTE working on CCS projects (from the Business Unit, seconded to projects or in E&P as support to the BU – 5MUSd) – expected to grow fast. Through the OGCI-CI (Climate Investments fund), TotalEnergies will invest 50 MUSD on CCS over 10 years (5MUSD per year) In 2017, TotalEnergies joined the Technology Centre Mongstad, operated by Norwegian state-owned Gassnova with a capacity of 100,000 tons of carbon a year. Since 2017, TotalEnergies is participating in a CCS project in Norway (Northern Lights). This project will be a milestone in the development of CCS in Europe as it will gather industrial emissions (from cement, waste to energy) from Norway but also potentially other European countries. In 2020, the final investment decision concludes the study phase during which Equinor, Shell and TotalEnergies worked closely with Norwegian authorities to conduct engineering studies and project planning. Since 2018, TotalEnergies is also involved in the	

2040. With 1% market share and 100$/ton of CO2, sales could represent 2.5 GUSD / year for TotalEnergies.		Clean Gas Project in the UK, based on the concept of hubs that can be replicated in other industrial areas. TotalEnergies also stepped up its R&D program in 2019 by entering partnerships with the National Carbon Capture Center in the United States and IFPEN in France. The Company has also launched a development study for a major pilot industrial scale project in Dunkirk (19.3 million-euro budget over 4 years, including 14.8 million euros in European Union subsidies), a project to produce methanol from CO_2 and hydrogen in Germany, with the start-up Sunfire, and a feasibility study of an industrial system to capture and reuse the CO_2 produced by the LafargeHolcim cement works in the United States. All those projects will pave the way for the development of CO_2 storage.	

Identifier	Where in the value chain does the opportunity occur?	Opportunity type	Primary climate-related opportunity	Primary potential financial impact	Company-specific description	Time horizon	Likelihood
Opp4	Direct operations	Products and services	Development and/or expansion of low emission goods and services.	Increased revenue resulting from increased demand for products and services	**Energy storage** is a major challenge for the future of power grids and a vital accompaniment to renewable energies, which are intermittent by nature. Large-scale electricity storage is essential to promote the growth of renewables and enable them to make up a significant share of the electricity mix. The acquisition of Saft, completed in 2016, fully aligned with TotalEnergies' goal to develop in the low carbon electricity value-chain. Saft is a French company that celebrated its 100th anniversary in 2018 and specializes in the design, manufacture and marketing of high technology batteries for industry. Saft develops batteries based on nickel, lithium-ion and primary lithium technologies. The company is active in transport, telecommunications, industrial infrastructures, civil and military electronics, space, defence and energy storage.	Short-term	Very likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium	Yes, a single figure estimate	2 billion USD		

Explanation of financial impact	Cost to realize opportunity	Strategy to realize opportunity and eplanation of cost calculation	Comment
In 2020, Saft's turnover amounted to 694 million USD and could triple to more than 2 billion USD in 2030 (700 million USD *3=2 billons USD) as Saft is well placed to benefit from the growth in	1 billion USD	Saft is a French company that specializes in the design, manufacture and marketing of high technology batteries for industry. Saft develops batteries based on nickel, lithium- ion and primary lithium technologies. The company is active in transport, telecommunications, industrial infrastructures, civil and military electronics, space, defense and energy storage. Building on the strength of its technological know-how, and through its energy storage activities, Saft is well placed to benefit from the growth in renewable energies beyond its current activities, by offering massive storage capacities, combined with renewable electricity, which is intermittent by nature. This is one of Saft's main sources of growth. In 2019, the company strengthened its energy storage and electric mobility activity, with the creation of a joint-venture with Tianneng Energy	

renewable energies beyond its current activities, by offering massive storage capacities, combined with renewable electricity, which is intermittent by nature.		Technology (TET), a subsidiary of the private Chinese group Tianneng, with a view to developing their lithium-ion activity, and with the acquisition of Go Electric Inc., an American specialist in energy resilience solutions for microgrids. Additionally, Saft signed a contract with the Finnish operator TuuliWatti to build the largest energy storage system in the Nordic countries. Saft is also active in the European alliance working on a new generation of "solid electrolyte" batteries. TotalEnergies and PSA Group announced in January 2020 their plan to combine their know-how to develop an electric vehicles battery manufacturing activity in Europe. To that end, they intend to establish a joint venture named ACC (Automotive Cell Company). In 2018, TotalEnergies acquired G2Mobility a French leader in smart charging solutions. In 2020, the Company obtained a concession for 20,000 charge points in the Metropolitan Region of Amsterdam, acquired London's largest charging network for electric vehicles, with over 1,600 charge points installed, and will operate the public network of 2,300 charge points in Paris for a period of ten years. As of the end of 2020, TotalEnergies operated more than 18,000 charge points on business premises, on the roadside and within public and private facilities such as car parks, hotels and shopping centers. The Company aims to operate 150,000 charge points in Europe by 2025. Cost to realize the opportunity: In 2020, Saft is present in 19 countries and has over 4,200 employees. TotalEnergies acquired France-based battery manufacturer Saft in 2016 for around 1 billion USD.	

Identifier	Where in the value chain does the opportunity occur?	Opportunity type	Primary climate-related opportunity	Primary potential financial impact	Company-specific description	Time horizon	Likelihood
Opp5	Direct operations	Products and services	Development and/or expansion of low emission goods and services.	Increased revenue resulting from increased demand for products and services	Given the need to reduce transportation-related carbon emissions, **biofuels** — which lower carbon dioxide emissions by at least 50% compared to regular fuels will increasingly take their place as a substitute for conventional fuels. TotalEnergies is a pioneer in biofuels for more than 20 years in biofuels, and is now one of Europe's major actors with the contribution of incorporation of 2.2 Mt blended sustainable biofuels in 2020 for a worldwide distribution of 3 Mt.	Short-term	Very likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium	Yes, a single figure estimate	3 GUSD		

Explanation of financial impact	Cost to realize opportunity	Strategy to realize opportunity and eplanation of cost calculation	Comment
The 2020 biofuels sales represent over 3 GUSD.	900 MUSD	The Company intends to reach a market share of over 10% in Europe in HVO production and has set the objective to become a leader in renewable diesel with more than 2 Mt/y in 2025, by capturing synergies with existing assets (converting existing assets, co-processing, developing on existing platforms). In south-eastern of France (La Mède), TotalEnergies has converted a former oil refinery into a new energies complex: • A biorefinery with a capacity of 500,000 tonnes of biofuel per year. • An 8-megawatt solar farm that can supply 13,000 people. • A unit to produce 50,000 cubic meters per year of AdBlue®, an additive that reduces nitrogen oxide emissions from trucks.	

		The production at La Mède started up in 2019, with a capacity of 0.5 Mt per year of hydrotreated vegetable oil (HVO) based on sustainable certified charges. In September 2020, the Company announced a project to convert its Grandpuits refinery into a zero-crude complex including a biofuel plant which is expected to be commissioned in 2024. This plant will have a production capacity of 170 kt a year of sustainable jet biofuel, 120 kt a year of road biofuel and 50 kt a year of bionaphtha, for producing bioplastics. For the most part, it will be supplied with animal fats from Europe and used cooking oil, supplemented with other vegetable oils, excluding palm oil. The conversion of the refinery will represent a total investment of over 600 MUDS. Biofuels that are currently available are mainly made with vegetable oil and sugar. In July 2021, TotalEnergies announced that, as of 2023, palm oil would no longer be used to produce renewable fuels at La Mède or any facilities in the Company. For more than 10 years, TotalEnergies' R&D teams have developed technologies that have broadened the range of usable resources, while also meeting the need for sustainability. The consortium BioTFuel is working on, for example, the development of lignocellulose (plant waste). Cost to realize opportunity: project of converting a former oil refinery into a new energy complex, represented a capital expenditure of 300 MUSD for La-Mède and 600 MUDS for the conversion of Grandpuits refinery. The project was launched in 2015.	

Identifier	Where in the value chain does the opportunity occur?	Opportunity type	Primary climate-related opportunity	Primary potential financial impact	Company-specific description	Time horizon	Likelihood
Opp6	Direct operations	Products and services	Development and/or expansion of low emission goods and services.	Increased revenue resulting from increased demand for products and services	Consumers will require products that emit less CO_2 for the same use. In **Marketing**, our objectives are to change the customer relationship by bringing in more and more services (e.g. to move from selling fuel products to providing advice on how to best heat the home) in order to gain new customers and retain them. TotalEnergies developed a label, Ecosolutions with a worldwide market, that helps its customers (consumers, businesses, manufacturers and communities) to offer efficient, innovative, lower-energy solutions that are more respectful of its shared environment.	Short-term	Very Likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
High	Yes, a single figure estimate	115 MUSD		

Explanation of financial impact	Cost to realize opportunity	Strategy to realize opportunity and eplanation of cost calculation	Comment
Other financial implications are additional market share and attraction of new customers. TotalEnergies Ecosolutions products represented around 10% of TotalEnergies net operating revenues of Marketing & Services business segment in 2020 (approximately 115 MUSD).	1 MUSD	TotalEnergies introduced products labelled Ecosolutions in 2009. At the end of 2020, there were 86 products. To manage this label, TotalEnergies has set up a steering committee for TotalEnergies Ecosolutions, where new labels are audited by an external consultant, and then submitted to steering committee approval: in 2020, the TotalEnergies Ecosolutions Steering Committee met 4 times. External verification costs of the labelled products are 20 KUSD/year including validation of new labelled products. Cost to realized opportunity 20 KUSD + 4 FTEs/year (1 MUSD).	

Identifier	Where in the value chain does the opportunity occur?	Opportunity type	Primary climate-related opportunity	Primary potential financial impact	Company-specific description	Time horizon	Likelihood
Opp7	Direct operations	Products and services	Development and/or expansion of low emission goods and services.	Increased revenue resulting from increased demand for products and services	According to the World Bank, around 1 billion people still do not have access to electricity and 3 billion still have to use intense carbon energy (biomass, coal...) to cook. In this context, TotalEnergies provides **solar energy solutions** to low income customers in emerging countries and facilitate access to energy to a large number of people with its TotalEnergies Access to Energy Program. This program is designed to test and develop innovative and profitable business models on a large scale, with a view to finding long-term solutions to the problem of energy access for low-income communities. The distribution of affordable and reliable off-grid solar solutions is the first major achievement of the program. The distribution channels used are both TotalEnergies' traditional networks (service stations) and "last mile" networks built with local partners to bring these solutions to isolated areas. Reseller networks are then set up and economic programs developed with the support of external partners to recruit and train young solar resellers.	Short-term	Very likely

Magnitude of impact	Are you able to provide a potential financial impact figure?	Potential financial impact figure	Potential financial impact figure – minimum (currency)	Potential financial impact figure – maximum (currency)
Medium	Yes, a single figure estimate	1 million USD		

Explanation of financial impact	Cost to realize opportunity	Strategy to realize opportunity and eplanation of cost calculation	Comment
This new business segment could potentially bring several millions of USD of benefits. However, TotalEnergies' Access to energy program is a social business and profitability is not the main driver. Beyond the extra financial values (social impact), this business unit could bring substantial financial benefits to the Company (potentially estimated at more than 1 MUSD/year in 5 years).	1 MUSD	TotalEnergies is engaged in the sector through institutional partnerships (International Finance Corporation, Global Off-Grid Lighting Association) and is in contact with institutions to undertake joint initiatives (United Nations Development Program and World Bank). Economic profitability is required to sustain the business and ensure its long-term impact. Social impact: lamp sold impacts 4.4 people (source World Bank), which means that more than 12 million people have benefited from TotalEnergies Access to energy activities since launch in 2011 (by the end of 2020, 3.8 million lamps and solar kits had been sold). Resellers benefit from the project, through the training they receive (product knowledge, selling skills) and through the revenue generated by the lamps sold. The promotional campaigns and tools go a long way towards raising people's awareness about the use of solar products. TotalEnergies' strategy is to: draw on the resources and assets of an international Company (local affiliates with an extended network of service-stations and facilitated logistics), develop partnerships with international and local stakeholders in contact with off-grid communities, develop relevant activities throughout the value chain. To date, over 40 TotalEnergies affiliates distribute solar solutions across Africa, Asia, and Latin America, with dedicated resources (budget and human resources). 6 FTEs at headquarters and representatives in the affiliates, which represents about 1 MUSD/year.	

C3 Business strategy

Business strategy

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

[x] Yes, and we have developed a low-carbon transition plan

(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Yes	In May 2021, the Board of Directors of TotalEnergies under the chairmanship of TotalEnergies Chairman and Chief Executive Officer, submitted a resolution on the energy transition of TotalEnergies towards Carbon Neutrality at the Annual General Meeting: • The Board of Directors proposed to shareholders that this transformation should be anchored in the by-laws by changing the company name from TOTAL SE to TotalEnergies SE. • - The Board presented a resolution for an advisory vote on the Company's ambition for sustainable development and energy transition to carbon neutrality and its 2030 objectives. This resolution was based on the joint statement issued with the global investor initiative Climate Action 100+ in May 2020, on the strategy and objectives announced to shareholders by TotalEnergies in September 2020 and in February 2021, and finally on the work of the Board of Directors on the TotalEnergies Company's ambition. The Board of Directors thus gave shareholders the opportunity to express their view on the strategy for the transition to net zero that it had set for the Company. The shareholders voted by a very large majority, more than 90% of the votes cast, in favor of the resolution proposed by the Board of Directors, thus supporting the strategy and the transition plan proposed by the Board of Directors.

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

[x] Yes, qualitative and quantitative

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

Climate-related scenarios and models applied	Details
IEA Sustainable development scenario and Net Zero scenario	The Company's strategy incorporates the challenges of climate change. TotalEnergies is relying on global energy demand data from the "World Energy Outlook" issued by IEA since 2016 and on its own supply assessments. The Company determines the oil & gas prices scenarios based on assumptions on the evolution of core indicators of the Upstream activity (investment forecasts, decline in production fields, changes in oil & gas reserves and supply by area and by nature of oil & gas products), of the Downstream activity (demand for oil & gas products in different markets, changes in refining capacity and demand for petroleum products) and by integrating challenges raised by the climate. The IEA presents in its reports various scenarios: New Policies Scenario (NPS), Current Policies Scenario (CPS), Sustainable Development Scenario (SDS) and Net-Zero Emissions by 2050 Scenario (NZE). To define an energy mix that would help meet the world's energy needs while reducing emissions, TotalEnergies analyses the scenarios prepared by the IEA and develops its own long-term scenario to 2050 in its TotalEnergies Energy Outlook aligned with its ambition to reach carbon neutrality by 2050 together with society.
Other, please specify: TotalEnergies Energy Outlook	To define an energy mix that would help meet the world's energy needs while reducing emissions, TotalEnergies analyses the scenario prepared by the IEA in its TotalEnergies Energy Outlook. Growing energy demand and getting to Net Zero are the two global trends underpinning the TotalEnergies Energy Outlook and thus the evolutions of the energy markets that TotalEnergies integrates into its strategy. The TotalEnergies Energy Outlook 2050 is a prospective vision of the evolution of energy supply and demand on the planet, around two scenarios: "Momentum" and "Rupture". The Rupture scenario is aligned with a well below 2°C scenario. It foresees technological breakthroughs, a reinforcement of public policies, a massive switch to renewable energies, an accelerated electrification in all sectors and a significant decrease in energy intensity. Those scenarios cover all business segments of TotalEnergies organisation: upstream, refining, Gaz power and renewables activities; and marketing and services. In 2020, TotalEnergies' CEO and board of Directors reviewed the Company ambition in the fight against climate change and decided to take additional steps towards the Paris goals, with the ambition to get to Net Zero by 2050 together with society, for its global business across its production and energy products used by its customers (scope 1+2+3).

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

Business area	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate Change impacts clients' needs and behaviours, as well as other stakeholders' expectations. For instance, more and more of our clients request low carbon solutions, as well as services to help them improving their energy consumption. The impact is high, in particular as the Company aims at becoming the Responsible Energy Major, and first amongst its peers. This led TotalEnergies to develop Ecosolutions products, with a worldwide market, that helps its customers (consumers, businesses, manufacturers and communities) to get efficient, innovative, lower-energy solutions that are more respectful of its shared environment. 86 products were labelled TotalEnergies Ecosolutions in 2020. Time scale: short term (two years), medium term (until 2030) and long term (beyond 2030).
Supply chain and/or value chain	Yes	The Company believes in the essential role of natural gas in the energy transition. Strengthening the position of gas in the energy mix must however be accompanied by a greater focus on control of methane emissions. To preserve the advantage that gas offers in terms of GHG emissions compared to coal for electricity generation, it is necessary to strictly reduce the methane emissions associated with the production and transportation of gas, i.e. along the whole gas value chain. TotalEnergies' methane emissions of oil and gas assets are at 0.15% of the Company's marketed operated gas production and one of the best amongst its peers. For gas producing assets, intensity is below 0.1%. Improving measurement of these emissions and their reduction is a priority for TotalEnergies in terms of environmental impact. On this basis, since 2014 the Company has been a member of Oil & Gas Methane Partnership between governments and industrial companies for the improvement of tools to measure and control methane emissions set up by the UN Environment Program, and the non-profit organization Environmental Defense Fund. In 2020, TotalEnergies, joined the second phase of the OGMP (2.0), which aims at defining a broader and more ambitious methane-reporting framework, extended to the entire gas value chain and to non-operated assets. The objective for TotalEnergies is to reach the Gold Standard, the highest level of recommended reporting practices, by 2023 for its operated assets and by 2025 for its non-operated assets. As a member of the Oil & Gas Climate Initiative, TotalEnergies provides technical and financial support to international research such as the Oil and gas Methane Science Studies and signed the guiding principles on the reduction of methane emissions by the gas value chain. The impact is medium as it is critical for proving the role of gas. TotalEnergies has reduced its methane emissions by 50% between 2010 and 2020. Time scale: short term (two years), medium term (until 2030) and long term (beyond 2030).

Business area	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Investment in R&D	Yes	Climate change influences more and more where the Company puts its efforts in terms of R&D and new investments. In particular, it has led to increasing the R&D budget associated to CCS. Once efficient mechanisms to support the development of Carbon Capture and Storage (CCS) are implemented, TotalEnergies will be in a favourable position to take a significant part to this development because of its extensive knowledge on this topic. This knowledge will come from its R&D program (which will make TotalEnergies competitive), its experience in geosciences (needed for CO2 storage), and its business development capacities. The development of CCS has been a long-standing Company commitment, in particular through its Lacq pilot project conducted from 2010 to 2016 (oxy-combustion capture and storage in a depleted reservoir). TotalEnergies is devoting 10% of its R&D investments to CCS. The Company relies on a dynamic R&D policy to conduct and develop its activities. There are two main priorities: developing activities and programs with a direct impact on TotalEnergies' aim to become the responsible energy major; anticipating technological breakthroughs in order to seize opportunities for development relating to the evolution of the energy mix. The impact is high. In 2020, the Company invested $895 million in Research & Development (R&D), compared to $968 million in 2018 and $986 million in 2017. There are more than 4,000 employees dedicated to R&D activities. Time scale: short term (two years), medium term (until 2030) and long term (beyond 2030).
Operations	Yes	For more than a decade, TotalEnergies has integrated climate changes issues in the way it operates. In particular, it has led the Company to reduce routine flaring in a proactive manner, as well as to introduce energy efficiency efforts wherever possible. As part of its Global Gas Flaring Reduction Partnership, TotalEnergies identified the Ofon field as a major contributor to its gas flaring volumes and responded by initiating the Ofon Phase 2 Project. Ofon is an offshore field that came on stream in 1997, and is located some 180 kilometers from Port Harcourt (about 65 kilometers from shoreline). In its first phase, all associated gas was flared with minor fuel gas usage. One of the main objectives of OFON 2 project was to stop flaring by the end of 2014. The Company's flare down objective in Ofon field was achieved end of 2014, accounting for an immediate 10% cut in the overall volume of gas flared by the Company's Exploration & Production activities. This reduction in gas flaring is estimated to have led to reduction of greenhouse gas emissions from 80kt CO_2 equivalent to less than 8 ktCO_2 equivalent in the Ofon field. Both topics are covered by Company objectives, which are actually translated in business units and assets objectives. The impact is high. Time scale: short term (two years), medium term (until 2030) and long term (beyond 2030).

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

Financial planning elements that have been influenced	Description
Revenues	Internal studies conducted by TotalEnergies have shown that a long term CO2 price of 40 USD / ton applied worldwide would have a negative impact of around 6% on the discounted present value of the Company's assets (upstream and downstream). In addition, the average reserve life of the Company's proved and probable reserves is approximately 18 years and the discounted value of proved and probable reserves with a reserve life beyond 18 years is less than 15% of the discounted value of the Company's upstream assets. The impact is low-medium. Time scale: short term (two years), medium term (until 2030) and long term (beyond 2030). To ensure the viability of TotalEnergies' projects and our long-term strategy with regard to climate change issues, TotalEnergies takes into account in the economic evaluations of investments submitted to the Executive Committee a CO2 price of $40/t with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios. This is consistent with TotalEnergies' support for mechanisms to replace coal with gas in power generation and our investments in low-carbon energies.
Operating costs	TotalEnergies' strategy is built around four key areas that integrate the challenges of climate change: 1) Developing a profitable low-carbon electricity business 2) Growing in gas value chains (natural gas, biogas and hydrogen); 3) Oil products: avoiding expensive oil, reducing emission at our facilities and promoting biofuels; 4) Investing in carbon sink businesses. In order to ensure the viability of its projects and long-term strategy in light of the challenges raised by climate change, the Company integrates into the financial evaluation of investments presented to the Executive Committee, a long-term CO2 price of 40 USD per ton or the actual price of CO2 in a given country if higher with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios. The Company performs sensitivity tests to assess the ability of its asset portfolio to withstand an increase in the price per ton of CO_2. The impact is medium. Time scale: short term (two years), medium term (until 2030) and long term (beyond 2030).
Capital expenditures/capital allocation	As the worldwide demand for electricity is expected to grow strongly in the coming decades (~2% CAGR over 2015-40, source IEA), TotalEnergies intends to become a major player in low-carbon electricity. Since the early 2000s, TotalEnergies is developing along the whole of the low-carbon electricity value chain, from electricity generation, storage and sale to the end customer. TotalEnergies invests 1.5 to 2 billion USD in low carbon electricity and aims at holding an installed gross production capacity of renewable electricity of more than 25GW by 2025, of which 10 GW in Europe. The Company has a diversified portfolio of assets in wind, solar and hydro and is as well a leader of French and Belgian low carbon electricity distribution market. In the hydrocarbon area, TotalEnergies has been shifting progressively its investment efforts from oil to gas. Gas was a third of our production ten years ago and 50% today. The energy transition has therefore a strong impact our capital allocation. Additionally, through the integration of a CO_2 / carbon cost in all new capital expenditure decisions since 2008 of all its new projects / activities brought to TotalEnergies' Excom directly integrate the impact of its future greenhouse gas emissions. In order to ensure the viability of its projects and long-term strategy in light of the challenges raised by climate change, from 2016 to 2019, the Company integrates, into the financial evaluation of investments presented to the Executive Committee, a long-term CO_2 price of $30 to $40 per ton (depending on the price of crude oil), or the actual price of CO_2 in a given country if higher. Since January 1, 2020, a CO_2 price of $40/t with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios. The Company performs sensitivity tests to assess the ability of its asset portfolio to withstand an increase in the price per ton of CO_2. The impact is medium. Time scale: short term (two years), medium term (until 2030) and long term (beyond 2030).

Financial planning elements that have been influenced	Description
Acquisitions and divestments	TotalEnergies' strategy is built around four key areas that integrate the challenges of climate change: 1) Growing in gas value chains (natural gas, biogas and hydrogen); 2) Developing a profitable low-carbon electricity business; 3) Oil products: avoiding expensive oil, reducing emission at our facilities and promoting biofuels; 4) Investing in carbon sink businesses. This strategy is reflected in TotalEnergies acquisitions and divestments: Divestments: Following completion of the sale in 2015 of its subsidiary TotalEnergies Coal South Africa, the Company ceased its coal production activities. In addition, in 2016 the Company ended its coal trading activities. In 2018 the Company sold its interests in the Joslyn oil sands project. Acquisitions: TotalEnergies acquired Eren (2017, renewable energy) Direct Energie (2018, gas and electricity suppliers on the French and Belgian markets), Quadran (renewable energy 2018), Saft (2016 - Energy Storage), Engie's LNG assets (2018), G2Mobility (2018), Energías de Portugal's (2020), Foronche (2021 Biogas) The impact is high. Time scale: short term (two years), medium term (until 2030) and long term (beyond 2030).
Access to capital	The growing concern of certain stakeholders with regards to climate change could also have an impact on certain external financing of the Company's projects or influence certain investors involved in the oil and gas sector. In June 2017, the TCFD of the G20's Financial Stability Board published its final recommendations on information pertaining to climate to be released by companies. TotalEnergies publicly announced in 2017 its support for the TCFD and its recommendations. TotalEnergies discloses its climate related Governance, Strategy, Risk Management, and Metric & Target according to the TCFD recommendations. The impact is low. Time scale: short term (two years), medium term (until 2030) and long term (beyond 2030).
Assets	In 2020, internal studies conducted by TotalEnergies showed that a long-term CO2 price of 40 USD / ton applied worldwide would have a negative impact of around 6% on the discounted present value of the Company's assets (upstream and downstream). In addition, the average reserve life of the Company's proved and probable reserves is approximately 20 years and the discounted value of proved and probable reserves with a reserve life of more than 20 years is less than 15% of the discounted value of the Company's upstream assets. TotalEnergies has reviewed its oil assets that can be qualified as "stranded". The only projects concerned are the Fort Hills and Surmont oil sands projects. TotalEnergies has decided to take into account only proved reserves for impairment testing on these two assets. This leads to an additional exceptional asset impairment of $5,460 million in operating income and $5,474 million in net income, Group share.

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

i) How TotalEnergies' business strategy is influenced - Internal processes:
Regulatory watch: after the Paris agreement, TotalEnergies decided, early 2016, to fully integrate climate into its strategy and to take into account the implications of the 2°C scenario across its value chain. TotalEnergies' objectives for the next 20 years are to contribute to building a low-carbon future that does not curb economic and social development, and that meets the challenges of demographic growth.
Prospective aspect watch: TotalEnergies' strategy incorporates the challenges of climate change using the IEA scenarios and internal scenarios as a reference.

TotalEnergies is a member of OGCI and is involved in different working groups that help companies focus on best practices to integrate climate risks and opportunities into their strategy.

ii) Examples of how the business strategy has been influenced:
TotalEnergies' board and top management decided to publish a specific report on climate in 2016, updated every year - and to create a combined Strategy & Climate Division in order for climate, a global concern, to be fully integrated into TotalEnergies' overarching strategy. A new business segment called Gas, Renewables & Power (GRP) was created in 2016: it spearheads TotalEnergies' ambitions in low-carbon businesses by expanding in downstream gas and renewable energies and in energy efficiency businesses.

TotalEnergies positions itself on high-growth low-carbon markets and intends to offer customers an energy mix with a carbon intensity that shall gradually decrease. To accompany these changes, TotalEnergies introduced in 2018 a carbon intensity indicator for the energy products used by its customers. It additionally introduced an emission reduction target set early 2019 by TotalEnergies' Executive Committee on GHG emissions (Scopes 1&2) of TotalEnergies' operated oil and gas facilities. This objective is included in TotalEnergies executives' compensation. In 2020, TotalEnergies' CEO and board of Directors reviewed the Company's ambition in the fight against climate change and decided to take additional steps towards the Paris goals, with the ambition for TotalEnergies to get to Net Zero by 2050 together with society, for its global business across its production and energy products used by its customers (scope 1+2+3).

iii) The main aspects of climate change that influenced our strategy:
Regulatory changes: to ensure that investment projects are as profitable as anticipated in the desirable event that the international community agrees to put a cost on CO_2 emissions, between 2008 and 2016 investments have been valued since based on a cost of 25€/tCO_2. As of 2016, this cost has been raised to 30 to 40 USD/tCO_2 depending on the price scenario retained. Since January 1, 2020, a CO2 price of $40/t with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios.

iv) Influence on short term strategy:
TotalEnergies takes into account the challenges related to climate change and strives to improve the impact of its activities on the environment and the carbon intensity of its production mix, by setting its short-term climate strategy around the following focal points:

- Continue efforts in reducing GHG emissions:
  - Reduce GHG emissions (Scopes 1 & 2) on the Company's operated oil & gas facilities of 46 Mt CO2e in 2015 to less than 40 Mt CO2e by 2025 (a 15% decrease). By 2030, the target is a reduction of at least 40% of the net emissions compared to 2015 for its operated oil & gas activities.
  - Reduce routine flaring by 80% on operated facilities between 2010 and 2020 in order to eliminate it by 2030.
  - Improve by an average of 1% per year the energy efficiency of the Company's operated facilities since 2010.
  - Maintain the intensity of methane emissions for Upstream hydrocarbons activities below 0.2% of commercial gas produced at all operated oil and gas facilities, and below 0.1% of commercial gas produced on operated gas facilities.
  - Maintain the intensity of CO2e emissions from operated facilities forUpstream hydrocarbons activities under 20 kg CO2e/boe
  - Reduce the average carbon intensity of the energy products used by customers worldwide by more than 20% between 2015, the date of the Paris Agreement, and 2030 (Scopes 1, 2, 3).
  - Achieve in 2030, a level of worldwide emissions (Scope 3) lower in absolute terms than in 2015.
  - Reduce by at least 30% by 2030 the indirect GHG emissions related to the use by customers of the energy products sold for end use (Scope 3) in Europe in absolute terms, compared to 2015. This 30% reduction target is extended to all the Scopes 1, 2, 3 emissions in Europe.

- Select new oil and gas projects by focusing on low break-even costs, while meeting the highest standards of safety and environmental stewardship.
- Improve the energy efficiency of its facilities and products with a 450 M$ capital investment plan in energy efficiency **between 2018 and 2025** in downstream facilities.
- Develop sustainable biofuels.

v) Influence on long term strategy:
Through the integration of a CO_2 / carbon cost in all new capital expenditure decisions since 2008, all of its new projects / activities brought to TotalEnergies' Excom directly integrate the impact of its future GHG emissions. TotalEnergies strives to improve the impact of its activities on the environment and the carbon intensity of its production mix, by setting its long-term climate strategy around the following focal points:

- Growing in natural gas: to respond responsibly to the strong rise in demand for electricity, TotalEnergies remains committed to gas, whose CO2 emissions are half those of coal when used to generate electricity. The Company wishes to be present throughout the whole gas chain, from production to end customer. Develop CCS (up to 10% of its R&D spending) and preserve and restore the capacity of ecosystems to act as carbon sinks (with an investment budget $100 million per year from 2020 onwards).
- Develop a profitable low-carbon electricity business. To meet this target, TotalEnergies will increase its investment to more than 20% of per year between 2021 and 2025.

vi) Paris Agreement influence:
In the wake of the Paris agreement, TotalEnergies decided to fully integrate climate change into its strategy and to create a new Gas, Renewables and Power division, whose director is a member of the ExCom. For any new project, TotalEnergies considers how it might contribute to the local NDC.

vii) Strategic advantage:
Being at the same time one of the largest gas player and a world solar leader provides TotalEnergies a key competitive advantage in the race to prepare for the future. Engaging in international initiatives and seeking continuous improvement also enables TotalEnergies to develop additional profitability and to differentiate from its main competitors. The simultaneous growth of gas and renewables is encouraging TotalEnergies to take a broader approach to the end-to-end electricity value chain.

C4 Targets and performance

Targets

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

Both absolute and intensity targets

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

Target reference number	Year target was set	Target coverage	Scope(s) (or Scope 3 category)	Base year	Covered emissions in base year (metric tons CO2e)	Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
Abs1	2019	Company-wide	Scope 1+2 (market-based)	2015	45,800,000	100%

Target year	Targeted reduction from base year (%)	Covered emissions in target year (metric tons CO2e) [auto-calculated]	Covered emissions in reporting year (metric tons CO2e)	% of target achieved[auto-calculated]
2025	12.7%	40,000,000	35,800,000	100%

Target status in reporting year	Is this a science-based target?	Please explain (including target coverage)
Achieved	No, but we anticipate setting one in the next 2 years	At the beginning of 2019, TotalEnergies announced a target to reduce GHG emissions (Scopes 1 & 2) on its hydrocarbon upstream activities from 46 Mt CO_2e to less than 40 Mt CO_2e in 2025.The 2020 Scope 1&2 emissions were at 35,8 Mt of CO2e compared to 41.5Mt in 2019.

Target reference number	Year target was set	Target coverage	Scope(s) (or Scope 3 category)	Base year	Covered emissions in base year (metric tons CO2e)	Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
Abs2	2020	Company-wide	Net Scope 1+2 (market-based)	2015	45,800,000	100% (net zero emissions)

Target year	Targeted reduction from base year (%)	Covered emissions in target year (metric tons CO2e) [auto-calculated]	Covered emissions in reporting year (metric tons CO2e)	% of target achieved[auto-calculated]
2030	40%	27,480,000	35,800,000	54%

Target status in reporting year	Is this a science-based target?	Please explain (including target coverage)
New	No, but we anticipate setting one in the next 2 years	TotalEnergies set a target to reduce GHG net emissions (Scopes 1 & 2) of its hydrocarbon upstream activities by at least 40% compared to 2015. The calculation of net emissions takes into account natural carbon sinks like forest, regenerative agriculture and wetlands.

Target reference number	Year target was set	Target coverage	Scope(s) (or Scope 3 category)	Base year	Covered emissions in base year (metric tons CO2e)	Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
Abs3	2020	Company-wide	Net Scope 1+2 (market-based)	2015	45,800,000	100% (net Zero emissions)

Target year	Targeted reduction from base year (%)	Covered emissions in target year (metric tons CO2e) [auto-calculated]	Covered emissions in reporting year (metric tons CO2e)	% of target achieved[auto-calculated]
2050	100%	Zero Net emissions	35,800,000	22%

Target status in reporting year	Is this a science-based target?	Please explain (including target coverage)
New	No, but we anticipate setting one in the next 2 years	TotalEnergies shares the ambition to get to Net Zero emissions by 2050, together with society with an objective of net zero across TotalEnergies' worldwide operations by 2050 or sooner for scope 1 and 2 (Net Emissions). The calculation of net emissions takes into account natural carbon sinks like forest, regenerative agriculture and wetlands.

Target reference number	Year target was set	Target coverage	Scope(s) (or Scope 3 category)	Base year	Covered emissions in base year (metric tons CO2e)	Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
Abs4	2020	Country/region	Scope 3: Use of sold products	2015	256,000,000	63%

Target year	Targeted reduction from base year (%)	Covered emissions in target year (metric tons CO2e) [auto-calculated]	Covered emissions in reporting year (metric tons CO2e)	% of target achieved[auto-calculated]
2030	30%	179,200,000	190,000,000	86%

Target status in reporting year	Is this a science-based target?	Please explain (including target coverage)
New	No, but we anticipate setting one in the next 2 years	TotalEnergies set a target to reduce by at least 30% by 2030 the indirect GHG emissions related to the use by customers of the energy product sold for end use, Scope 3, in Europe (European Union, Norway, the UK and Switzerland).

Target reference number	Year target was set	Target coverage	Scope(s) (or Scope 3 category)	Base year	Covered emissions in base year (metric tons CO2e)	Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
Abs5	2020	Country/region	Scope 1+2 (market-based) + Scope 3 (Use of sold products)	2015	280,000,000	61%

Target year	Targeted reduction from base year (%)	Covered emissions in target year (metric tons CO2e) [auto-calculated]	Covered emissions in reporting year (metric tons CO2e)	% of target achieved[auto-calculated]
2030	30%	196,000,000	213,000,000	80%

Target status in reporting year	Is this a science-based target?	Please explain (including target coverage)
New	No, but we anticipate setting one in the next 2 years	TotalEnergies set a target to reduce by at least 30% by 2030 the indirect GHG emissions (Scope1, 2 and 3) in Europe (European Union, Norway, the UK and Switzerland).

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

Target reference number	Year target was set	Target coverage	Scope(s) (or Scope 3 category)	Intensity metric	Base year	Intensity figure in base year (metric tons CO2e per unit of activity)	% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure
Int1	2019	Business activity	Scope 1+2 (market-based)	Other: kg CO_2-e per barrel of oil equivalent (BOE)	2018	20 kg CO_2-e / BOE	44%

Target year	Targeted reduction from base year (%)	Intensity figure in target year (metric tons CO2e per unit of	% change anticipated in absolute Scope 1+2 emissions	% change anticipated in absolute Scope 3 emissions	Intensity figure in reporting year (metric tons CO2e per unit of activity)

		activity) [auto-calculated]			
2025	N.A (to be maintained)	20 kg CO_2e	N.A.	N.A	18 kg CO_2-e / BOE

% of target achieved[auto-calculated]	Target status in reporting year	Is this a science-based target?	Please explain (including target coverage)
100%	Achieved	No, but we anticipate setting one in the next 2 years	In 2019, the Company has set a target of maintaining the intensity of CO_2e emissions of facilities operated by the Company for its Upstream hydrocarbon activities under 20 kg CO_2-e/boe.

Target reference number	Year target was set	Target coverage	Scope(s) (or Scope 3 category)	Intensity metric	Base year	Intensity figure in base year (metric tons CO2e per unit of activity)	% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure
Int2	2018	Company-wide	Scope 1+2 (market-based) + Scope 3 (upstream & downstream)	Other: g CO_2-e per Megajoule (MJ)	2015	71 g CO2-e / MJ	100%

Target year	Targeted reduction from base year (%)	Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]	% change anticipated in absolute Scope 1+2 emissions	% change anticipated in absolute Scope 3 emissions	Intensity figure in reporting year (metric tons CO2e per unit of activity)
2030	20%	57 g CO2e / MJ	N.A.	N.A.	64 g CO2-e / MJ

% of target achieved[auto-calculated]	Target status in reporting year	Is this a science-based target?	Please explain (including target coverage)
50%	Underway	No, but we anticipate setting one in the next 2 years	This intensity indicator measures the average GHG emissions of energy products throughout their lifecycle, from production to end use by the Company's customers per energy unit. This indicator takes into account: – as the numerator:

			– the emissions connected to the production and conversion of energy products used by the customers on the basis of the Company's average emission rates; – the emissions connected to the use of energy products used by the customers. For each product, stoichiometric emission factors are applied to these sales to obtain an emission volume. Non-fuel use products (bitumen, lubricants, plastics, etc.) are not taken into account; – negative emissions stored thanks to CCS and natural carbon sinks. – as the denominator: the quantity of energy sold, given that electricity is put on an equal footing with fossil fuels taking account of average load factors and efficiency rates.

Other climate-related targets

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Select all that apply from the following options:

- [ ] Target(s) to increase low-carbon energy consumption or production
- [x] Target(s) to reduce methane emissions
- [x] Net-zero target(s)
- [ ] Other climate-related target(s)
- [ ] No other climate-related targets

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Select all that apply from the following options:

- [ ] Target(s) to increase low-carbon energy consumption or production
- [x] Target(s) to reduce methane emissions
- [ ] Other climate-related target(s)
- [ ] No other climate-related targets

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

Target reference number	Year target was set	Target coverage	Target type: absolute or intensity	Target type: category	Metric (target numerator if reporting an intensity target)	Target denominator (intensity targets only)
Oth1	2018	Business division	Intensity	Methane reduction target	Methane leakage rate (%)	Other, please specify: commercial gas produced in Mm^3

Base year	Figure or percentage in base year	Target year	Figure or percentage in target year	Figure or percentage in reporting year	% of target achieved [auto-calculated]
2017	0.30	2025	0.20	0.15	100%

Target status in reporting year	Is this target part of an emissions target?	Is this target part of an overarching initiative?	Please explain (including target coverage)
Achieved	This intensity target is part to the GHG emission reduction target for Scopes 1 & 2on operated oil & gas facilities of 46 Mt CO2e in 2015 to less than 40 Mt CO2e in 2025 (ABS3) and at least 40% compared to 2015 by 2030 for the Net emissions (ABS4). By targeting a zero-routine flaring in 2030, TotalEnergies is also engaged to reduce methane emissions (ABS1- ABS2).	No	In 2020, the methane emission intensity for the upstream hydrocarbon operated facilities scope is 0.15% of the commercial gas produced. The methane emissions represent 4% of the Company's GHG emissions (C02-eq) and approximatively 30% are related to flaring. The upstream Oil and Gas asset CH4 emissions represent 98% of the Company methane emissions in 2020, with 62 kt of methane.

Target reference number	Year target was set	Target coverage	Target type: absolute or intensity	Target type: category	Metric (target numerator if reporting an intensity target)	Target denominator (intensity targets only)
Oth2	2020	Business division	Intensity	Methane reduction target	Methane leakage rate (%)	Other, please specify: commercial gas produced in Mm^3

Base year	Figure or percentage in base year	Target year	Figure or percentage in target year	Figure or percentage in reporting year	% of target achieved [auto-calculated]
2019	0.1	2025	0.1	0.1	100%

Target status in reporting year	Is this target part of an emissions target?	Is this target part of an overarching initiative?	Please explain (including target coverage)
Achieved	This intensity target is part to the GHG emission reduction target for Scopes 1 & 2 on operated oil & gas facilities of 46 Mt CO_2-e in 2015 to less than 40 Mt CO_2-e in 2025 (ABS3) and at least 40% compared to 2015 by 2030 for the Net emissions (ABS4). By targeting a zero-routine flaring in 2030, TotalEnergies is also engaged to reduce methane emissions (ABS1-ABS2).	No	In 2020, the methane emission intensity for its upstream hydrocarbon activities operated gas facilities is less than 0.1% of the commercial gas produced. The methane emissions represent 4% of the Company's GHG emissions (C02-eq) and approximatively 30% are related to flaring. The upstream methane emissions represent 98% of the Company methane emissions in 2020, with 62 kt of methane.

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

Target reference number	Target coverage	Absolute/intensity emission target(s) linked to this net-zero target	Target year for achieving net zero	Is this a science-based target?	Please explain (including target coverage)
NZ1	Company-wide	Abs1 Abs2 Abs3	2050	No, but we anticipate setting one in the next 2 years	TotalEnergies announced its ambition to reach Carbon Neutrality by 2050 or sooner, for its worldwide operated activities, Scope 1 & 2.

Target reference number	Target coverage	Absolute/intensity emission target(s) linked to this net-zero target	Target year for achieving net zero	Is this a science-based target?	Please explain (including target coverage)
NZ2	Company-wide	Abs4 Abs5 Int-2	2050	No, but we anticipate setting one in the next 2 years	TotalEnergies has the ambition to reach Carbon Neutrality by 2050 or sooner, for all worldwide indirect emissions related to the use of by its customers of energy product sold for end use (Scope 3).

Methane targets

(C-OG4.2d) Indicate which targets reported in C4.1a/b incorporate methane emissions, or if you do not have a methane-specific emissions reduction target for your oil and gas activities, please explain why not and forecast how your methane emissions will change over the next five years.

Not applicable.

Emissions reduction initiatives

(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.

[x] Yes

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

Stage of development	Number of initiatives	Total estimated annual CO2e savings in metric tons CO2e (only for rows marked *)
Under investigation	100+	
To be implemented*	250	3,000,000
Implementation commenced*	40	1,000,000
Implemented*	1	1,000,000
Not to be implemented	0	

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

Initiative category	Initiative type	Estimated annual CO2e savings (metric tons CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency, as specified in C0.4)	Investment required (unit currency, as specified in C0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency in production processes	Process optimization	1,000,000	1	Voluntary	40,000,000 USD	450,000,000 USD	21-25 years	> 30 years	TotalEnergies has a 450 MUSD capital investment plan in energy efficiency in Downstream facilities. Monetary savings are estimated based on TotalEnergies' internal carbon price. Based on externally available literature and internal studies, the investment required lies between 30 and 300 USD per ton of CO_2.

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

Method	Comment
Compliance with regulatory requirements / standards	EU ETS, Carbon Pollution Reduction Scheme (CPRS – Australia).
Dedicated budget for energy efficiency	In Exploration & Production and the Refining & Chemicals divisions.
Dedicated budget for low carbon product R&D	Approximately 25% of the Company's R&D budget dedicated to low carbon technologies.
Dedicated budget for other emission reduction activities	TotalEnergies Ecosolutions program, and dedicated budget for CCS (CO_2 capture and storage) R&D.
Employee engagement	Under consideration; projects are being defined.
Internal price on carbon	New investments projects presented to the Executive Committee are analysed in a hydrocarbon price scenario compatible with the goals of the Paris Agreement (Brent at $50/b according to the IEA SDS scenario and Henry Hub at $2.5/Mbtu), also considering a CO_2 price of $40/t or or the current price in a given country if it is higher than $40/t.). A sensitivity analysis is performed with a CO_2 price of $100/t as of 2030.
Partnering with governments on technology development	In particular, with the French agency ADEME, and also through the participation in R&D JIPs (Joint Industry Projects) in Canada, Australia, Norway, Europe.

Low-carbon products

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

[x] Yes

(C4.5a) Please provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation	Description of product/ Company of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project, or methodology used to classify product(s) as low-carbon or to calculate avoided emissions	% revenue from low-carbon product(s) in the reporting year	Comment
Group of products	TotalEnergies Ecosolutions: Products or services that provide a significant competitive advantage in terms of environmental impacts reduction (reducing consumption of energy, water and other resources or environmental impact) when compared with the market standard. It represents 86 products and services as of the end of 2020. Among these products: Fuel Eco lubricants, motor fuels, bitumen, special fluids and solvents, polymers, resins, solar panels. Energy Efficiency: White Certificates exist in various European countries (Italy, UK, France, etc.). In France, TotalEnergies' compliance with energy efficiency certificate requirements has led to 50 TWhc/year of energy savings during the last 3 years. TotalEnergies offers customers an energy efficiency consultancy service so that they can optimize their own energy consumption and reduce their GHG emissions.	Avoided emissions	Other	10	TotalEnergies Ecosolutions Products represented about 10% of TotalEnergies net operating revenues of the Marketing & Services business segment and 2 Mt CO_2 eq of avoided emissions. Avoided emissions related to White Certificates are estimated to 2Mt CO_2eq per year. This estimation is based on an average ratio calculated by ADEME (Agence de l'Environnement et de la Maîtrise de l'Energie).

Level of aggregation	Description of product/ Company of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project, or methodology used to classify product(s) as low-carbon or to calculate avoided emissions	% revenue from low-carbon product(s) in the reporting year	Comment
Group of products	Electricity: Activities in electricity production from low carbon rely on TotalEnergies; TotalEnergies renewables, SunPower. TotaEnergies is also involved in electic mobility, electricity storage with Saft batteries, and announced in 2020 the creation of a joint venture with Companye PSA (now Stellantis N.V.) called Automotive Cells Company (ACC) to develop and produce high performance electric vehicle batteries. In 2020, TotalEnergies created a solar power distribution joint venture with Adani Green Energy Limited (AGEL) in India. In January 2021, TotalEnergies announced the acquisition of a 20% stake in AGEL, thereby trengthening TotalEnergies' strategic alliance with the Adani Company in the Indian market and the Company's positioning in renewable energies. Natural Gas: TotalEnergies has made various acquisitions, i.e. Engie and Anadarko LNG assets in Mozambique, launched some major LNG projects: Ichthys, Yamal LNG, Cameron, Arctic LNG 2 project, Energia Costa Azul. In 2018, TotalEnergies entered a partnership with the Adani Company, India's largest private conglomerate in energy and gas infrastructures. Biogas & hydrogen:In 2020, TotalEnergies signed a Memorandum of Understanding with Clean Energy Fuels Corp. to establish a $100 million 50/50 joint venture to develop renewable gas production projects in the United States and in 2021, TotalEnergies announced the acquisition of Fonroche Biogaz, French market leader in biogas production. TotalEnergies also has an ambition to become a hydrogen producer and distributor. The Company and Engie signed a cooperation agreement to design, build and operate the Masshylia project, the biggest renewable hydrogen production site in France, located in the heart of TotalEnergies' La Mède biorefinery. Biofuels: In 2020, TotalEnergies incorporated 2.2 Mt of sustainable biofuels in Europe, of a global volume distributed by the Company of 3 Mt. In 2019, TotalEnergies started up the La Mède refinery with a scheduled capacity of 0.5 Mt per year of hydrotreated vegetable oil, and announced in 2020 a project to covert its Grandpuits refinery into a zero-crude complex including a biofuel production plant.	Low carbon product	Other	10	Cumulated GHG emissions of additional SunPower PV plant installed are compared to cumulated GHG emission of equivalent local electricity mix (kg CO2eq, over 30 years lifetime). The avoided emissions corresponding to SunPower PV plants installed by the end of 2020 are estimated at 10 Mt CO2. For the 2020 sales only, these are estimated at 1 Mt. Most low carbon businesses are under the responsibility of the new Gas, Renewables & Power (GRP) segment. The revenues from sales of GRP represented approximately 15% of the Company revenues from sales in 2020.

Methane reduction efforts

(C-OG4.6) Describe your organization's efforts to reduce methane emissions from your activities.

For over thirty years, the Company has made methane emissions reduction one of its priorities, originally for safety reasons. Since 2006, TotalEnergies has implemented a methane emissions reporting, which is verified yearly by a third party. This methane inventory is mainly based on flow metering for vents and flares as well as generic emissions factors and estimation from engineering calculations. This inventory is completed by a yearly Leak Detection And Repair (LDAR) campaign on each oil & gas operated assets. Those LDAR campaign using mainly ground based infrared camera will be progressively supplemented with satellite-based or drone-mounted aerial devices, as well as continuous measurements devices.

In 2020, methane emissions in relation to Hydrocarbons Upstream activities were at 0.15% of commercial gas produced for oil and gas facilities operated by the Company and less than 0.1% for gas facilities. The Company's target is to maintain this intensity below 0.2% and 0.1%. Methane emissions represents 64 kilotons and 4% of the Company's GHG emissions (CO_2 eq), with approximatively 30% related to flaring.

TotalEnergies is acting to eliminate routine flaring by 2030 as part of the World Bank's Global Gas Flaring Reduction, and thus to reduce the unburned Methane from flaring. TotalEnergies is acting as well to limit the source of venting on its existing installation and future project. For new projects, TotalEnergies follows design standards intended to ensure near-zero emissions. They include eliminating the use of gas driven instrument and continuous cold venting. Closed flares are systematically installed as on Clov in Angola, Moho Nord in Republic of the Congo and Egina in Nigeria.

In 2018, TotalEnergiesl embarked on an analysis of the sources of atmospheric methane release at its facilities (cold or process venting). In the course of that inventory, Elgin-Franklin was singled out as a site with significant emissions. The Elgin-Franklin gas and condensate field, which came on stream in 2001, is located in the British North Sea, approximately 240 kilometres east of Aberdeen, in Scotland. Vented emissions traced to the glycol regeneration unit totaled 3,600 tons of methane annually. Following an extensive study, engineers identified three solutions for cutting the site's emissions. Their choice was to reroute the vent, a move that prevents about 74 kt of CO2e annually, starting 2020.

TotalEnergies has various R&D programs dedicated to improve knowledge on measurement, detection and quantification of methane emissions, and to accelerate new technologies (cost-efficient sensors, remote detection, satellite, modeling). In 2018, the transverse anomaly detection infrastructure (TADI) was inaugurated. The TADI platform aims to test and qualify innovative technologies for gas leak detection and quantification. 4 campaigns were performed between 2018 and 2020, TotalEnergies developed a dedicated monitoring program combining both aerial and ground based campaigns, which will be deployed over the next years based on the typology of sites and the maturity of technologies.

In 2020, TotalEnergies, partner of this initiative since 2014, has joined the second phase of the Oil & Gas Methane Partnership (OGMP 2.0) of the United Nations Environment Programme, which brings together industrial companies, governments and NGOs to better monitor and report methane emissions in order to reduce them. This second phase of the partnership aims at defining a broader and more ambitious methane-reporting framework, extended to the entire gas value chain and to non-operated assets.

Within OGCI, for which the reduction of methane emissions is one of the main objectives, TotalEnergies contributes to improving the knowledge of these emissions. TotalEnergies is acting to disseminate good practices, especially in terms of transparency. At the end of 2017, the Company signed with other oil & gas companies, as well as non-governmental and scientific organizations, guidelines on the responsible management of methane at the operational level, R&D and sustainable regulations (Methane Guiding Principles).

TotalEnergies supports policies to reduce methane emissions from natural gas production and consumption. In November 2019, TotalEnergies wrote to the US agency in charge of the environment (US-EPA), through a public consultation process, to oppose the projected lowering of regulatory requirements on methane emission control in the oil and gas industry.

Leak detection and repair

(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?

[x] Yes

(C-OG4.7a) Describe the protocol through which methane leak detection and repair or other leak detection methods, are conducted for oil and gas production activities, including predominant frequency of inspections, estimates of assets covered, and methodologies employed.

Since 2006, TotalEnergies has engaged comprehensive leak detection and repair (LDAR) campaigns based on the use of Infra-Red cameras in most of its major upstream assets (Angola, Nigeria, UK, The Netherlands,…) and approximatively 80% of upstream affiliates are equipped with Infra-Red cameras (other affiliates using contracted services).Those campaigns are performed by affiliates or contractors on a yearly basis and repairs are done as soon as reasonably practical, TotalEnergies' Refining operated sector is also completely covered by regular LDAR surveys using recognized methodologies.

TotalEnergies has various R&D programs dedicated to improve knowledge on measurement, detection and quantification of methane emissions, and to accelerate new technologies (cost-efficient sensors, remote detection, satellite, modeling.). In 2018, the transverse anomaly detection infrastructure (TADI) was inaugurated. The TADI platform aims to test and qualify innovative technologies for gas leak detection and quantification, TotalEnergies is the only O&G company being equipped with such testing platform. Four campaigns were performed in 2018, 2019 and 2020.

TotalEnergies is developing the Airborne Ultra-light Spectrometer for Environmental Application, or AUSEA, in partnership with France's National Center for Scientific Research (CNRS). AUSEA is a miniaturized sensor, fitted onto a commercial drone, that can detect methane and carbon dioxide. This emerging technology will make it possible to measure greenhouse gases, estimate their path and use models to trace them back to their source. Testing has been conducted at TADI and our industrial sites in the Netherlands, France and Nigeria.

Based on this expertise and experience, TotalEnergies develops a dedicated monitoring program combining both aerial (satellite, drone) and ground based (Infra-Red Camera, fixed detection) campaigns which will be deployed over the next years depending on the type of site and the maturity of the technologies. In 2020, in Upstream, 6 kt of CH4 emissions compared to 7 kt in 2019, were due to fugitives losses and represents approximatively 10% of the TotalEnergies emissions (64kt in 2020). The main sources of fugitive losses could be valves, screwed connections, flanges, open-ended lines and pump seals, etc.

Flaring reduction efforts

(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization's efforts to reduce flaring, including any flaring reduction targets.

Reducing routine flaring has been a long-standing goal of the Company, with a commitment made in 2000 to have no continuous flaring of associated gas incorporated into the design of its new projects. The Company has supported the World Bank in developing and launching the Zero Routine Flaring initiative involving oil & gas companies, producing countries and international institutions. The initiative aims to support elimination of routine flaring by 2030. To ensure progression, an objective to decrease by 80% has been defined for 2020 compared to 2010, in other words, to achieve an average of 1.5 Mm^3/day. This objective was reached in 2017.

Furthermore, as part of the Global Gas Flaring Reduction program, TotalEnergies has worked alongside the World Bank for over 10 years to help producing countries and industrial players control routine flaring of associated gas.

C5 Emissions methodology

Base year emissions

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope	Base year start	Base year end	Base year emissions (metric tons CO2e)	Comment
Scope 1	01.01.2010	31.12. 2010	51,600,000	
Scope 2 (location-based)	01.01.2010	31.12. 2010	5,400,000	

Emissions methodology

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

[x] IPIECA's Petroleum Industry Guidelines for reporting greenhouse gas emissions, 2nd edition, 2011

C6 Emissions data

Scope 1 emissions data

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO_2e?

	2020	2019	2018
Scope 1 emissions (metric tons CO_2e)	35,569,886	40,661,555	40,475,670

In 2020, TotalEnergies set an ambition to reach carbon neutrality (Net Zero Emissions) by 2050 together with society and to support this ambition, TotalEnergies set targets and introduced number of indicators to steer its performance:

- Reduce GHG emissions (Scopes 1 & 2) on the Company's operated oil & gas facilities of 46 Mt CO_2e in 2015 to less than 40 Mt CO_2e by 2025 (a 15% decrease). By 2030, the target is a reduction of at least 40% of the net emissions compared to 2015 for its operated oil & gas activities
- Reduce routine flaring by 80% on operated facilities between 2010 and 2020 in order to eliminate it by 2030.
- Improve by an average of 1% per year the energy efficiency of the Company's operated facilities since 2010.
- Maintain the intensity of methane emissions for Upstream hydrocarbons activities below 0.2% of commercial gas produced at all operated oil and gas facilities, and below 0.1% of commercial gas produced on operated gas facilities.
- Maintain the intensity of CO_2e emissions from operated facilities for Upstream hydrocarbons activities under 20 kg CO_2e/boe.

Scope 2 emissions reporting

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

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting Scope 2, location-based figure.	We are reporting Scope 2, market-based figure.	

Scope 2 emissions data

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

Please complete the following table:

Scope 2, location-based - 2020	Scope 2, location-based - 2019	Scope 2, location-based - 2018	Comment
2,791,597	3,596,127	3,742,356	Scope 2 emissions: indirect emissions attributable to energy consumption by site.
Scope 2, market-based – 2020	**Scope 2, marketed-based - 2019**	**Scope 2, marketed-based - 2018**	**Comment**
2,847,912	Not calculated	Not calculated	First year of scope 2 emissions market-based reporting is 2020, no historical data available.

(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?

[x] No

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Not applicable

Scope 3 emissions data

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

Scope 3 category	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Please explain
Purchased goods and services	Not relevant, explanation provided				The percentage of purchased goods and services Scope 3 emissions is not significant compared to emissions related to the use of sold products.

Scope 3 category	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Please explain
Capital goods	Not relevant, explanation provided				The percentage of capital goods Scope 3 emissions is not significant and represents less than 1% of the emissions related to the use of sold products.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not relevant, explanation provided				The percentage of Fuel-and-energy-related activities (not included in Scope 1 or 2) Scope 3 emissions is not significant compared to the emissions related to the use of sold products .
Upstream transportation and distribution	Not relevant, explanation provided				The percentage of upstream transportation and distribution Scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products.
Waste generated in operations	Not relevant, explanation provided				The percentage of waste generated in operations Scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products
Business travel	Not relevant, calculated	20,000	This figure is provided by Totals global business travel agencies.		The Business travel category is not relevant compared to the use of sold product category (less than 1%).
Employee commuting	Not relevant, calculated	42,400	TotalEnergies had 105,476 employees at the end of 2020 and, on average, according to the French Statistics Bureau INSEE, the average consumption is 0.67 tCO2 per annum. 40 % of homeworking in Europe in 2020.	100	The Employee commuting category is not relevant compared to the use of sold product category (0.02% = 42,400 / 410,000,000).
Upstream leased assets	Not relevant, explanation provided				The percentage of upstream leased assets Scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products and to Downstream transportation and distribution.

Scope 3 category	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Please explain
Downstream transportation & distribution	Relevant, calculated	4,500,000	The methodology is based on the emission factors (in tons*km).	100	The detailed figures are collected for time charter and spot contracts, for sea, and river transport. The downstream transportation and distribution category represent around 1% of the use of product category (1% = 4,500,000 / 350,000,000).
Processing of sold products	Not relevant, explanation provided				The percentage of processing of sold products Scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products.
Use of sold products	Relevant, calculated	350,000,000	The Company follows the Oil & Gas industry reporting guidelines published by IPIECA and which are conform to the GHG Protocol methodologies. Emissions are calculated based on sales of finished products for which the next stage is end use, in other words combustion of the products to obtain energy. A stoichiometric emission factor is applied to these sales (oxidation of molecules to carbon dioxide) to obtain an emission volume (see TotalEnergies' 2020 Universal Registration Document, p. 255).	100	The Use of sold product is the main Scope 3 category for TotalEnergies.
End of life treatment of sold products	Not relevant, explanation provided				The percentage of end of life treatment of sold products Scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products.
Downstream leased assets	Not relevant, explanation provided				The percentage of downstream leased assets scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products.
Franchises	Not relevant, explanation provided				The percentage of franchises Scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products.

Scope 3 category	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Please explain
Investments	Not relevant, explanation provided				This percentage of investments Scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products.
Other (Upstream)	Not relevant, explanation provided				This percentage of Other upstream Scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products
Other (Downstream)	Not relevant, explanation provided				This percentage of Other downstream Scope 3 emissions is not significant and represents much less than 1% of the emissions related to the use of sold products.

Carbon dioxide emissions from biologically sequestered carbon

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

[x] No

Emissions intensities

(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	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change	Reason for change
18	15,868,247,439 kg of CO_2-eq	barrel of oil equivalent (boe)	900,744,006	Market-based	10%	Decreased	This intensity is calculated with the emissions scope 1 and 2 of the Upstream hydrocarbon activities divided by the 100% operated hydrocarbon combined production in barrel of oil equivalent. The objective of the Company is to maintain this intensity below 20 kg CO_2-eq /boe.
36	14,444,754,100 kg of CO_2-eq	Other: barrel of product	400,249,274	Market based	18%	Increased	This intensity is calculated with the Scope 1+2 emissions of the refineries operated by TotalEnergies (100% operated) divided by TotalEnergies' refinery throughput (100% operated). The intensity increased between 2020 (36 kg CO_2-eq /bbl) compared to 2019 (30 kg CO_2-eq/t) due to the impact of the Covid 19 on TotalEnergies activites and refinery throughput (100% operated) .

Emissions intensities: Oil and gas

(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO2e) per unit of hydrocarbon category.

Unit of hydrocarbon category (denominator)	Metric tons CO2e from hydrocarbon category per unit specified	% change from previous year	Direction of change	Reason for change	Comment
Other: hydrocarbon combined production in barrel of oil equivalent	18	10%	Decreased	Slight decreased between 2019 and 2020, due to the implementation of GHG reduction project for upstream activities and the impact of the Covid-19 pandemia on the TotalEnergies' activities.	This intensity is calculated with the emissions scope 1 of the Upstream operated hydrocarbon activities divided by the 100% hydrocarbon combined production in barrels of oil equivalent. The objective of the Company is to maintain this intensity below 20 kg CO_2e/boe.

Unit of hydrocarbon category (denominator)	Metric tons CO2e from hydrocarbon category per unit specified	% change from previous year	Direction of change	Reason for change	Comment
Thousand barrels of refinery throughput	31	15%	Increased	The increase between 2020 (31 kg CO_2-eq/t) compared to 2019 (27 kg CO_2-eq/t) due to the impact of the Covid 19 on TotalEnergies activites and refinery throughput (100% operated).	This intensity is calculated with the Scope 1 emissions of the refineries operated by TotalEnergies (100% operated) divided by TotalEnergies' refinery throughput (100% operated).

(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.

Oil and gas business division	Estimated total methane emitted expressed as % of natural gas production or throughput at given division	Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division	Comment
Upstream	0.15	0.10	The intensity of the Oil and Gas assets methane emission is below • Around 0.15% if the denominator is commercial gas produced • below 0.10% if the denominator is Oil and Gas production (tCH4/100t hydrocarbon). The Company's objectives is to reduce its methane intensity for Oil and Gas facilities to below 0.2 and for Gas facilities to below 0.10%.

C7 Emissions breakdown

Scope 1 breakdown: GHGs

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

[x] Yes

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

Greenhouse gas	Scope 1 emissions (metric tons of selected GHG, in CO2e)	GWP Reference
CO_2	33,573,059	IPCC Fourth Assessment Report (AR4 – 100 years)
CH_4	1,599,607	IPCC Fourth Assessment Report (AR4 – 100 years)
N_2O	397,220	IPCC Fourth Assessment Report (AR4 – 100 years)
Other:	0	IPCC Fourth Assessment Report (AR4 – 100 years)

(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.

Emissions category	Value chain	Product	Gross Scope 1 CO_2 emissions (metric tons CO_2)	Gross Scope 1 methane emissions (metric tons CH4)	Total gross Scope 1 GHG emissions (metric tons CO2e)	Comment
Combustion	Upstream	Oil	5,039,865	2,690	5,230,732	Gross scope 1 CO_2 combustion emissions are split between Oil and Gas (50%-50%).
Combustion	Upstream	Gas	5,039,865	2,690	5,230,732	Gross scope 1 CO_2 combustion emissions are split between Oil and Gas (50%-50%).
Combustion	Downstream	Unable to disaggregate	12,395,866	350	12,488,375	
Flaring	Upstream	Oil	1,859,039	8,153	2,080,491	Gross scope 1 CO_2 emissions are split between Oil and Gas (50%).
Flaring	Upstream	Gas	1,859,039	8,153	2,080,491	Gross scope 1 CO_2 emissions are split between Oil and Gas (50%).
Flaring	Downstream	Unable to disaggregate	603,108	207	610,780	Refining
Venting	Upstream	Oil	1,310	17,271	254,113	Gross scope 1 CO_2 emissions are split between Oil and Gas (50%).

Emissions category	Value chain	Product	Gross Scope 1 CO_2 emissions (metric tons CO_2)	Gross Scope 1 methane emissions (metric tons CH4)	Total gross Scope 1 GHG emissions (metric tons CO2e)	Comment
Venting	Upstream	Gas	1,310	17,271	254,113	Gross scope 1 CO_2 emissions are split between Oil and Gas (50%).
Fugitives	Upstream	Oil	0	3,116	255,058	Gross scope 1 CO_2 fugitive emissions are split between Oil and Gas (50%).
Fugitives	Upstream	Gas	0	3,116	255,058	Gross scope 1 CO_2 fugitive emissions are split between Oil and Gas (50%).
Fugitives	Downstream	Unable to disaggregate	0	875	15,251	
Process emissions	Upstream and Downstream	Unable to disaggregate	6,773,657	97	6,814,692	

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Europe (incl.Russia)	20,652,672
Africa	9,560,043
Americas	4,278,431
Asia + Australasia	453,623
Middle East	625,117

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

Select all that apply from the following options:

- [x] By business division
- [ ] By facility
- [ ] By activity

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

Business division	Scope 1 emissions (metric tons CO2e)
Hydrocarbon Upstream Activities	15,856,889
Integrated Gas, Renewables and Power (excluding gas upstream activities)	2,566,471
Refining & Chemicals	17,052,222
Marketing & Services	94,304

Scope 1: sector production activities

(C-OG7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

Sector production activity	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions, metric tons CO2e	Comment
Chemicals production activities	0		
Oil and gas production activities (upstream)	15,856,889		Hydrocarbon Upstream activities
Oil and gas production activities (midstream)	2,566,471		Integrated Gas renewables and Power
Oil and gas production activities (downstream)	17,146,526		Refining & Chemicals, Marketing & Services

Scope 2 breakdown: country

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Americas	1,156,056	1,080,092	1,808,769	-
Africa	64,923	64,924	199,024	-
Asia + Australasia	63,667	63,669	95,536	-
Europe (incl. Russia)	1,451,378	1,583,654	3,512,919	-
Middle East	55,573	55,573	114,772	-

Scope 2: business breakdowns

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

[x] By business division

(C7.6a) Break down your Total gross global Scope 2 emissions by business division.

Business divisions	Scope 2, location-based emissions, metric tons CO_2e	Scope 2, market-based emissions, metric tons CO_2e
Upstream	108,070	110,358
Gas, Renewables & Power	41,445	42,390
Refining & Chemicals	2,534,714	2,592,826
Marketing & Services	105,559	100,724
Holding	1,809	1,614

Scope 2: sector production activities

(C-OG7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

Sector production activity	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Chemicals production activities	0	0	
Oil and gas production activities (upstream)	109,879	111,972	Hydrocarbon Upstream activities + Holding
Oil and gas production activities (midstream)	41,445	42,390	Integrated Gas renewables and Power
Oil and gas production activities (downstream)	2,640,273	2,693,550	Refining & Chemicals, Marketing & Services

(C-CH7.8) Disclose the percentage of your organization's Scope 3, Category 1 emissions by purchased chemical feedstock.

Purchased feedstock	Percentage of Scope 3, Category 1 tCO2e from purchased feedstock	Explain calculation methodology
-	-	-

(C-CH7.8a) Disclose sales of products that are greenhouse gases.

	Sales, metric tons	Comment
CO_2	-	-
CH_4	-	-
N_2O	-	-
Others: HFCs, PFCs, SF_6, NH_3	-	-

Emissions performance

(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?

[x] Decreased

(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.

Reason	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	No major change in renewable energy consumption impacted scope 2 emission between 2019 and 2020.
Other emissions reduction activities	6,000,000	Decreased	13%	TotalEnergies' Scope 1+2 greenhouse gas emissions (operated scope) were 45 $MtCO_2$-eq in 2019 and 39$MtCO_2$-eq in 2020 (therefore a decrease of approx. 13% = (45-39/45)*100, i.e. 6 $MtCO_2$-eq) The decrease in emissions is partially due to by the impact of the Covid-19 pandemia on TotalEnergies activites. Without the effect of the pandemia covid, the decrease was assessed at 8%. A decrease in global flaring is in 2020, -26% compared to 2019 (-26% = (5.7 – 4.2 / 5.7) * 100)).
Divestment	0	No change	0	No divestment in 2020
Acquisitions	0	No change	0	No impact in 2020
Mergers	0	No change	0	No mergers in 2020.
Change in output	0	No change	0	No change in 2020.
Change in methodology	0	No change	0	No modification of the reporting methodology in 2020.
Change in boundary	0	No change	0	No modification of the reporting boundaries in 2020.
Change in physical operating conditions	0	No change	0	Although all our emissions are reported in our H@rpe system, we are not entering into that kind of details in the present report.
Unidentified	0	No change	0	

Reason	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Other	1,650,000	Decreased	26%	Global flaring has decreased in 2020, -26% compared to 2019 (-26% = (5.7 – 4.2 / 5.7) * 100)) and routine flaring has decreased 33% in 2020 (33% = (0.9 – 0.6 / 0.9) * 100). The decrease in flaring is due shorter start-up in Africa, UK, and global flaring reduction. The volumes of gas flared gas totaled 4.2 m^3 / d in 2020. It's assumed that 1 Mm^3/day of flaring is equivalent to 1.1 Mt CO_2 per year.

(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?

[x] Market-based

C8 Energy

Energy spend

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

More than 50% but less or equal to 55%

Note: Energy accounts for more than half of our refineries' operating costs.

Energy-related activities

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

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

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

Energy carrier	Heating value	MWh from renewable sources	MWh from non-renewable sources	total (renewable + non-renewable) MWh
Consumption of fuel (MWh's in LHV)	LHV (lower heating value)	0	91,371,301	91,371,301
Consumption of purchased or acquired electricity	N/A	860,000	6,196,179	7,056,179
Consumption of purchased or acquired steam	N/A	0	4,396,727	4,396,727
Consumption of self-generated non-fuel renewable energy	N/A	0	N/A	0
total energy consumption	N/A	860,000	101,964,207	102,824,207

(C-CH8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

Energy carrier	Heating value	total MWh
Consumption of fuel (MWh's in LHV)	LHV (lower heating value)	N/A
Consumption of purchased or acquired electricity	N/A	N/A
Consumption of purchased or acquired heat	N/A	N/A
Consumption of purchased or acquired steam	N/A	N/A
Consumption of purchased or acquired cooling	N/A	N/A
Consumption of self-generated non-fuel renewable energy	N/A	N/A
total energy consumption	N/A	N/A

(C8.2b) Select the applications of your organization's consumption of fuel.

Fuel application	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	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) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels	Heating value	total MWh consumed by the organization	MWh consumed for the self-generation of electricity	MWh consumed for the self-generation of heat	Emission factor	Unit	Emission factor source	Comment
Natural gas	LHV (lower heating value)	80,966,052	127,433,192	0	2.7	metric tons CO_2-e / metric ton	EU ETS Monitoring reporting guidelines	When required (e.g. EU ETS), fuel analyses are used. Such analyses are progressively extended throughout all our operations worldwide and are performed based on the frequency required by the quality control of the analysis of fuel components. Otherwise, TotalEnergies uses standard emission factors (as stated in the European Guidelines and the API Guidelines where relevant).
Other: Liquid fuels	LHV (lower heating value)	1,104,072	1,104,072	0	3.1	metric tons CO_2-e / metric ton	EU ETS Monitoring reporting guidelines	When required (e.g. EU ETS), fuel analyses are used. Such analyses are progressively extended throughout all our operations worldwide and are performed based

Fuels	Heating value	total MWh consumed by the organization	MWh consumed for the self-generation of electricity	MWh consumed for the self-generation of heat	Emission factor	Unit	Emission factor source	Comment
								on the frequency required by the quality control of the analysis of fuel components. Otherwise, TotalEnergies uses standard emission factors (as stated in the European Guidelines and the API Guidelines where relevant).
Other: Solid fuels	LHV (lower heating value)	9,301,177	9,301,177	0				

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

Energy Carrier	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	6,202,244	3,358,244	3,844,000	0
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

(C-CH8.2d) Provide details on electricity, heat, steam, and cooling your organization has generated and consumed for chemical production activities.

Energy Carrier	total Gross generation (MWh) inside chemicals sector boundary	Generation that is consumed (MWh) inside chemicals sector boundary
Electricity	N.A	N.A
Heat	N.A	N.A
Steam	N.A	N.A
Cooling	N.A	N.A

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method	Low-carbon technology type	Country/area of consumption of low-carbon electricity, heat, steam or cooling	MWh consumed accounted for at a zero emission factor	Comment
Standard product offering by an energy supplier supported by energy attribute certificates	Nuclear	Netherlands	294,000	

Feedstock consumption: Chemicals

(C-CH8.3) Does your organization consume fuels as feedstocks for chemical production activities?

[x] Yes

(C-CH8.3a) Disclose details on your organization's consumption of fuels as feedstocks for chemical production activities.

Chemical feedstocks derive from 94% of oil primary resources, and 6% of natural gas.

(C-CH8.3b) State the percentage, by mass, of primary resource from which your chemical feedstocks derive.

	Percentage of total chemical feedstock (%)
Oil	93.87
Natural gas	6.0
Coal	0
Biomass	0.08
Waste (non-biomass)	0.05

C9 Additional metrics

Other climate-related metrics

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

Please complete the following table:

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain
Waste	59	% of recycled or valorized waste	total waste	9	Decreased	The decrease in the valorization rate in 2020 is mainly due to the drop in activity of the Refining & Chemicals segment linked to the COVID-19 pandemic and the end of soil remediation works of the Île-de-France pipeline.
Other: SO_2 emissions	34	Kt	N/A	12	Decreased	In 2010, SO_2 emissions totaled 99 kt, and the target for 2020 is to remain below 49.5 kt, a level reached in 2017. The reduction in emissions in 2020 is mainly due to a decrease in activity at refining units relating to shutdowns and to the COVID-19 pandemic.

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain
Other: NOx emissions	64	Kt	N/A	11	Decreased	NOx emissions mainly concern hydrocarbon exploration and production activities and are primarily located offshore and far away from the coast. Their impact on air quality is therefore considered to be minor. The decrease in 2020 is mainly due to a decrease in activity at refining units relating to shutdowns and to the COVID-19 pandemic.
Other: HC content of water discharges, offshore	12.8	mg/l	N/A	2	Decreased	The Company's target is to maintain hydrocarbon content of water discharges below 30 mg/l for offshore sites. The hydrocarbon content is well below 30 mg/l, and 100% of sites have meet the target.
Other: HC content of water discharges, onshore	1.9	mg/l	N/A	0	No change	The Company's target is to maintain hydrocarbon content of water discharges below 15 mg/l for onshore sites. The hydrocarbon content is well below 15 mg/l, and 100% of sites have met the target.

1P Oil and gas reserves and production

(C-OG9.2a) Disclose your net liquid and gas hydrocarbon production (Total of subsidiaries and equity-accounted entities).

Hydrocarbon category	Year-end net production	Comment
Crude oil and condensate, million barrels	563	Equity share domain according to the United States Securities & Exchange Commission.
Natural gas liquids, million barrels	0	
Oil sands, million barrels (includes bitumen and synthetic crude)	0	
Natural gas, billion cubic feet	2,645	Equity share domain according to the United States Securities & Exchange Commission.

1P Methodologies

(C-OG9.2b) Explain which listing requirements or other methodologies you use to report reserves data. If your organization cannot provide data due to legal restrictions on reporting reserves figures in certain countries, please explain this.

The definitions used for proved, proved developed and proved undeveloped oil and gas reserves are in accordance with the United States Securities & Exchange Commission (SEC) Rule 4-10 of Regulation S-X as amended by the SEC Modernization of Oil and Gas Reporting release issued on December 31, 2008. Proved reserves are estimated using geological and engineering data to determine with reasonable certainty whether the crude oil or natural gas in known reservoirs is recoverable under existing regulatory, economic and operating conditions. TotalEnergies' oil and gas reserves are consolidated annually, taking into account, among other factors, levels of production, field reassessments, additional reserves from discoveries and acquisitions, disposal of reserves and other economic factors. Unless otherwise indicated, any reference to TotalEnergies' proved reserves, proved developed reserves, proved undeveloped reserves and production reflects the Company's entire share of such reserves or such production. TotalEnergies' worldwide proved reserves include the proved reserves of its consolidated subsidiaries as well as its proportionate share of the proved reserves of equity affiliates. The reserves estimation process involves making subjective judgments. Consequently, estimates of reserves are not exact measurements and are subject to revision under well-established control procedures.

The reserves booking process requires, among other things: that internal peer review of technical evaluations is carried out to ensure that the SEC definitions and guidance are followed; and that management makes significant funding commitments towards the development of the reserves prior to booking. The average reserve life of the Company's proved and probable reserves is approximately 18 years.

2P and 3P reserves are not disclosed as it is confidential information. As of December 31, 2020, 1P reserves are 12,328 Mboe for hydrocarbons, 5,804 Mboe for liquids and 35,220 BCF for Gas.

Estimated total reserves 2P & 3P

(C-OG9.2c) Disclose your estimated total net reserves and resource base (million BOE), including the total associated with subsidiaries and equity-accounted entities.

Estimated total net proved + probable reserves (2P) (million BOE)	Estimated total net proved + probable + possible reserves (3P) (million BOE)	Estimated net total resource base (million BOE)	Comment
			2P and 3P reserves are not disclosed as it is confidential information.

Percentage split for 2P, 3P reserves

(C-OG9.2d) Provide an indicative percentage split for 2P, 3P reserves, and total resource base by hydrocarbon categories.

Hydrocarbon category	Net proved + probable reserves (2P) (%)	Net proved + probable + possible reserves (3P) (%)	Net total resource base (%)	Comment
Crude oil / condensate / Natural gas liquids				2P and 3P reserves are not disclosed as it is confidential information.
Natural gas				2P and 3P reserves are not disclosed as it is confidential information.
Oil sands (includes bitumen and synthetic crude)				2P and 3P reserves are not disclosed as it is confidential information.

Percentage split for 1P, 2P, 3P production

(C-OG9.2e) Provide an indicative percentage split for production, 1P, 2P, 3P reserves, and total resource base by development types.

Development type	In-year net production (%)	Net proved reserves (1P) (%)	Net proved + probable reserves (2P) (%)	Net proved + probable + possible reserves (3P) (%)	Net total resource base (%)	Comment
						2P and 3P reserves are not disclosed as it is confidential information.

Total refinery throughput

(C-OG9.3a) Disclose your total refinery throughput capacity in the reporting year in million barrels per year.

Total refinery throughput capacity	Throughput (Million barrels per year)
Capacity	718

Feedstocks used in refinery

(C-OG9.3b) Disclose feedstocks processed in the reporting year in million barrels per year.

Feedstock	Throughput (Millions barrels)	Comment
Oil	431	Includes equity share of refineries in which the Company holds a direct or indirect interest.
Other feedstocks	40	Includes equity share of refineries in which the Company holds a direct or indirect interest.
Total	471	Includes equity share of refineries in which the Company holds a direct or indirect interest.

Refinery products and net production

(C-OG9.3c) Are you able to break down your refinery products and net production?

[x] Yes

(C-OG9.3d) Disclose your refinery products and net production in the reporting year in million barrels per year.

Product produced	Refinery net production (Million barrels)*not including products used/consumed on site
Gasolines	93
Other: Aviation fuels	29
Other: Diesel and heating oil	201
Other: Heavy fuels	19
Other: Other products	99

Chemicals production

(C-OG9.3e) Please disclose your chemicals production in the reporting year in thousand metric tons.

Product produced	Production, thousand metric tons	Capacity, thousand metric tons
Other: Olefins		7,864
Other: Aromatics		7,018
Other: Polyethylene		2,438
Other: Polypropylene		2,840
Other: Polystyrene		1,024
Other: Others		116

Low-carbon investments: Coal / Electric utilities / Oil & gas

(C-OG9.6) 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
Yes	In 2020, the Company invested $895 million in Research & Development (R&D), compared to $968 million in 2019 and $986 million in 2017. More than 4,000 people are dedicated to R&D activities in 2020. The Company's investment for the future – including developments in the field of digital technology and carbon capture and storage industrial projects, as well as investments led by TotalEnergies Ventures (which focuses solely on carbon neutrality businesses and expects to invest a total of $400 million dollars by 2023) – has risen to more than $1.1 billion. As part of the Company's ambition to be the company of responsible energies, R&D programs are based around five focus areas that aim to address both the specific challenges of each segment and the Company's transverse challenges: Safety and environment; Low-carbon mix; Operational efficiency; New products; and Digital technology.

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

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Other: Low carbon technologies	Applied research and development	21-40%	220,000,000	To achieve the Company's ambition to be the ompany of responsible energies, TotalEnergies' R&D engages its employees in programs in five focus areas, that aim to address both the specific challenges in these segments and the Company's transverse issues. The program on energy mix is based on low-carbon energies combining gas and LNG (liquefied natural gas) technologies, sun and wind power, hybrid energy management systems, as well as battery technologies, CO2 capture, and storage (CCS) technologies, bioproducts, such as biofuels and biopolymers, hydrogen and recycling. 220 MUSD (excluding gas) corresponds to 25% of TotalEnergies' 2020 R&D budget.

Breakeven price (US$/BOE)

(C-OG9.7) Disclose the breakeven price (US$/BOE) required for cash neutrality during the reporting year, i.e. where cash flow from operations covers CAPEX.

Less than 30 USD / boe

Transfers & sequestration of CO_2 emissions

(C-OG9.8) Is your organization involved in the sequestration of CO2?

[x] Yes

(C-OG9.8a) Provide, in metric tons CO2, gross masses of CO2 transferred in and out of the reporting organization (as defined by the consolidation basis).

	CO2 transferred – reporting year (metric tons CO2)
CO_2 transferred in	0
CO_2 transferred out	0

C-OG9.8b) Provide gross masses of CO2 injected and stored for the purposes of CCS during the reporting year according to the injection and storage pathway.

Injection and storage pathway	Injected CO2 (metric tons CO2)	Percentage of injected CO2 intended for long-term (>100 year) storage	Year in which injection began	Cumulative CO2 injected and stored (metric tons CO2)
CO_2 used for enhanced oil recovery (EOR) or enhanced gas recovery (EGR)	32,000	30%	2017	38,000
CO_2 injected into a geological formation or saline formation for long-term storage	82,000	100%	2009	2,750,000
Other, please specify:				

(C-OG9.8c) Provide clarification on any other relevant information pertaining to your activities related to transfer and sequestration of CO2.

Although it was indicated in the 2020 reporting that the figures were in Company Share, the data in the table was actually in 100% view. We confirm that this year, the numbers provided are in Company share. They are based on estimates.

C10 Verification

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

Scope	Verification/assurance stats
Scope 1	Third party verification or assurance process in place
Scope 2 (location-based or market-based)	Third party verification or assurance process in place
Scope 3	Third party verification or assurance process in place

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

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported emissions verified (%)
Annual process	Complete	Limited assurance	TotalEnergies' 2020 Universal Registration document (Chapter 5)	See pages 276-279	ISAE 3000	100

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

Scope 2 approach	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/ section reference	Relevant standard	Proportion of reported emissions verified (%)
Scope 2 market-based	Annual process	Complete	Limited assurance	TotalEnergies' 2020 Universal Registration document (Chapter 5)	See pages 276-279	ISAE 3000	100

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/ section reference	Relevant standard	Proportion of reported emissions verified (%)
Scope 3: Use of sold products	Annual process	Complete	Limited assurance	TotalEnergies'2020 Universal Registration document (Chapter 5)	See pages 276-279	ISAE 3000	100

Other verified data

(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?

[x] Yes

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	Article L. 225-102-1 of the French Commercial Code	TotalEnergies' 2020 Universal Registration document (see pages 217-279). The external auditor EY verifies the social and environmental information. French companies have to report as per Article L. 225-102-1 of the French Commercial Code and disclose information on the Company and the entities included in the consolidation scope, in accordance with Article L. 233-16 of the French Commercial Code.
C5. Emissions performance	Year on year change in emissions (Scope 1 and 2)	Article L. 225-102-1 of the French Commercial Code	TotalEnergies' 2020 Universal Registration document (see pages 217-279). The external auditor EY verifies the social and environmental information. French companies have to report as per Article L. 225-102-1 of the French Commercial Code and disclose information on the Company and the entities included in the consolidation scope, in accordance with Article L. 233-16 of the French Commercial Code.
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	Article L. 225-102-1 of the French Commercial Code	TotalEnergies' 2020 Universal Registration document (see pages 217-279). The external auditor EY verifies the social and environmental information. French companies have to report as per Article L. 225-102-1 of the French Commercial Code and disclose information on the Company and the entities included in the consolidation scope, in accordance with Article L. 233-16 of the French Commercial Code.
C7. Emissions breakdown	Year on year change in emissions (Scope 1 and 2)	Article L. 225-102-1 of the French Commercial Code	TotalEnergies' 2020 Universal Registration document (see pages 217-279). The external auditor EY verifies the social and environmental information. French companies have to report as per Article L. 225-102-1 of the French Commercial Code and disclose information on the Company and the entities included in the consolidation scope, in accordance with Article L. 233-16 of the French Commercial Code.

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Other: Energy efficiency	Article L. 225-102-1 of the French Commercial Code	TotalEnergies' 2020 Universal Registration document (see pages 217-279). The external auditor EY verifies the social and environmental information. French companies have to report as per Article L. 225-102-1 of the French Commercial Code and disclose information on the Company and the entities included in the consolidation scope, in accordance with Article L. 233-16 of the French Commercial Code.
C9. Additional metrics	Other: Waste, water	Article L. 225-102-1 of the French Commercial Code	TotalEnergies' 2020 Universal Registration document (see pages 217-279). The external auditor EY verifies the social and environmental information. French companies have to report as per Article L. 225-102-1 of the French Commercial Code and disclose information on the Company and the entities included in the consolidation scope, in accordance with Article L. 233-16 of the French Commercial Code.

C11 Carbon pricing

Carbon pricing systems

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

[x] Yes

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

[x] EU ETS

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

System name	% of Scope 1 emissions covered by the ETS	% of Scope 2 emissions covered by the ETS	Period start date	Period end date
EU-ETS	64%	0%	01/01/2020	31/12/2020

Allowances allocated	Allowances purchased	Verified Scope 1 emissions in metric tons CO2e	Verified Scope 2 emissions in metric tons CO2e	Details of ownership	Comment
16,000,000	Not disclosed	22,500,000	0	Facilities we own and operate	Facilities owned and operated by TotalEnergies (mainly in the Refining & Chemicals business segment). The number of allowance purchases is confidential information and is not disclosed (0).

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

TotalEnergies' overall strategy and plans include:

- reducing GHG emissions resulting from our own operations and optimize energy efficiency, and
- optimizing CO_2 quotas management.

In Europe specifically, TotalEnergies is fully organised to optimise compliance with the EU ETS, through a close monitoring of positions, improvement projects and, when necessary, market transactions: a dedicated organisation dealing with emissions trading and quota management was set up in 2005 consisting of operational desks in each business unit, and a centralized trading desk which intervenes in the open market on their behalf. Through this organisation, positions are monitored on a regular basis with a view to ensure optimised compliance by the end of each calendar year. 64% of TotalEnergies scope 1 emissions in 2020 are from assets located in Europe, and amounted to 25 Mt CO2 equivalent. As part from its Net Zero Ambition, TotalEnergies has set a neutrality ambition in Europe covering Scope 1, 2 and 3 emissions.

TotalEnergies participates in the market, and the value of CO_2 is routinely taken into account in operational decisions of the business units participating in the scheme (such as power generation, energy project evaluation or refining optimisation). Additionally, through the integration of a CO_2 / carbon cost in all new capital expenditure decisions since 2008 of all its new projects / activities brought to TotalEnergies' Excom directly integrate the impact of its future greenhouse gas emissions.

From 2016 to 2019, TotalEnergies applies an internal CO_2 price of $30 to $40 per ton (depending on the price of crude oil), or the actual price of CO_2 in a given country if higher; since January 1, 2020, a CO_2 price of $40/t with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios in the economic calculations for all new projects worldwide.

TotalEnergies anticipates participating in trading schemes other than the EU ETS in the coming years (in China, USA, Canada, Kazakhstan, Mexico), depending on emerging regulations.

Project-based carbon credits

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

[x] No

Internal price on carbon

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

[x] Yes

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price	GHG Scope	Application	Actual price(s) used (Currency /metric ton)	Variance of price(s) used	Type of internal carbon price	Impact & implication
• Change internal behavior • Drive low-carbon investment • Stress test investments	Scope 1	To ensure that investment projects are as profitable as anticipated in the desirable event that the international community agrees to put a cost on CO_2 emissions, investments have been valued between 2008 and 2015 based on a cost of 25€ per ton of CO_2 emitted. As of 2016, new investments projects presented to the Executive Committee are evaluated using a long-term cost of 30 to 40 USD per ton of CO_2 emitted depending on the oil price scenario retained, or the actual price if it is higher in a given country. Since January 1, 2020, a CO_2 price of $40/t with a sensitivity of $100/t as from 2030, independent of the Brent price scenarios.	40 USD / ton	100 USD / ton by 2030	Shadow price	Taking into account for TotalEnergies' investment project decisions.

C12 Engagement

Value chain engagement

(C12.1) Do you engage with your value chain on climate-related issues?

[x] Yes, our suppliers
[x] Yes, our customers
[x] Yes, other partners in the value chain

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

Type of engagement	Details of engagement	% of suppliers by number	% total procurement spend (direct and indirect)	% of supplier-related Scope 3 emissions as reported in C6.5	Rationale for the coverage of your engagement	Impact of engagement, including measures of success
Engagement & incentivization (changing supplier behavior)	Run an engagement campaign to educate suppliers about climate change	100%	100%	100%.	The Company Fundamental Principles of Purchasing (FPP) is the basis for TotalEnergies' relations with its suppliers: it covers respect for human rights at work, protection of health, security and safety, preservation of the environment (including climate), prevention of corruption and of conflicts of interest, fight against fraud, respect for competition law, as well as the promotion of economic and social development. This is applicable to all the Company suppliers. The FPPs are included or attached to the Company contracts. They cover the preservation of the environment including climate. Early 2021, TotalEnergies' put in place a system to further evaluate suppliers' maturity related to climate: - at qualification stage, suppliers answer questions on climate (for example, whether they measure their carbon footprint and whether they participate to the CDP …) - a questionnaire was sent to the Top 200 Suppliers representing 1/3 of Company spend, to assess their climate maturity and roadmap.	TotalEnergies is currently putting in place a collaborative approach with its strategic suppliers. This program was launched in 2021, with 25 priority Suppliers. Impact of engagement and measures of success should be available starting in 2022.

Type of engagement	Details of engagement	% of suppliers by number	% total procurement spend (direct and indirect)	% of supplier-related Scope 3 emissions as reported in C6.5	Rationale for the coverage of your engagement	Impact of engagement, including measures of success
					The Company is currently carrying out a baseline estimation of the Scope 3 upstream emissions (categories 1 and 8) in line with GHG protocol methodology. The first estimate of these emissions, based on monetary emission factors (CO2 per $ spent) is 7 MtCO2e. The Company is currently working on its roadmap to address these emissions. TotalEnergies is putting in place a collaborative approach with its strategic suppliers with regards to climate. This program started in Q2 2021 with 25 priority suppliers. In addition, further sensitization will be organised with all the strategic suppliers before end 2021. Climate is also now systematically reviewed during annual business reviews with TotalEnergies' strategic suppliers. Climate considerations are therefore being considered in the overall procurement process, for both technical and commercial aspects, including carbon cost.	

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

Type of engagement	Details of engagement	% of customers by number	% customer-related Scope 3 emissions as reported in C6.5	Please explain the rationale for selecting this Company of customers and scope of engagement	Impact of engagement, including measures of success
Innovation & Collaboration	Other: Innovation & Collaboration		100%	Emissions at sites related to our operations (Scope 1 and 2 emissions) are within our control, and as a result we can take the necessary steps to reduce them. But emissions related to the use of our products by TotalEnergies customers (Scope 3 emissions) depend primarily on the choices they make. We closely monitor customer demand and consumption habits as part of our desire to help customers generate fewer carbon emissions across the life cycle of the products they use. To this end, we have developed a carbon intensity indicator that evaluates the average greenhouse gas emissions for the energy products used by our customers. It lets us track customer demand for lower-carbon products and keep tabs on the pace of the energy transition. TotalEnergies' objective is to reduce that carbon intensity by 20% between 2015 — the year of the Paris Agreement and 2030.	TotalEnergies has an objective to reduce its carbon intensity indicator by 20% between 2015 — the year of the Paris Agreement and 2030. In the longer term, beyond 2030, our ambition is to maintain or even accelerate this rate of reduction, depending on developments in technology and public incentive policies. That would add up to a total decrease of 35% by 2040. The carbon intensity of the products used by TotalEnergies customers has already decreased by 10% at the end of 2020. Additionally, TotalEnergies has set objectives for absolute scope 3 emissions in 2030 : to reduce them by 30% in Europe relative to 2015 and to reduce them worldwide relative to 2015, despite an anticipated growth in energy demand from our customers during the decade to come.

Type of engagement	Details of engagement	% of customers by number	% customer-related Scope 3 emissions as reported in C6.5	Please explain the rationale for selecting this Company of customers and scope of engagement	Impact of engagement, including measures of success
				Additionally, TotalEnergies has set objectives for absolute scope 3 emissions in 2030 : to reduce them by 30% in Europe relative to 2015 and to reduce them worldwide relative to 2015, despite an anticipated growth in energy demand from our customers during the decade to come. Our Strategy, R&D and Marketing teams have constant interaction with customers in order to assess changes and emerging needs. The TotalEnergies Ecosolutions program, which was launched in 2009, streamlines the work and exchanges between the Strategy, R&D, Innovation and Marketing teams, in order to design and promote new products and services to help our customers (both businesses and consumers) to reduce their environmental footprint such as energy consumption. TotalEnergies' priority targets are our main B2B (business to business) customers. Sales with the TotalEnergies Ecosolutions program contribute to around 10% of the Marketing & Services segment Net Operating Income.	At the end of 2020, 86 different products and services had received the TotalEnergies Ecosolutions label. According to our estimates, based on a comparison with reference products and services offering an equivalent outcome for the customer, the use of TotalEnergies Ecosolutions products and services sold in 2020 avoids 2,1 million tons of CO2 emissions (on the whole life cycle). White Certificates (or Energy Efficiency Certificates) exist in various European countries (Italy, UK, Denmark, France, etc.). In France, TotalEnergies' compliance with energy efficiency certificate requirements has led to: - around 100 direct and indirect jobs being created. - 100,000 energy efficiency operations annually, involving insulation solutions and furnace upgrades. - an enhanced customer relationship that can stimulate new solutions. - participation in car pooling initiatives involving 150,000 drivers. actions that encourage 40,000 TotalEnergies employees to cut their energy use at home.

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

TotalEnergies has the ambition to achieve carbon neutrality (net zero emissions) by 2050 from its production to the use of the energy products sold to its customers (Scopes 1, 2, 3), together with society, and is joining forces with multiple players in the value chain, through partnerships such as:

- *Coalition for the Energy of the Future* to support and accelerate the joint development of tangible energy solutions, therefore directly contributing to the reduction of carbon intensity of the transportation and logistics sectors (marine, road transportation...).
- *Getting to Zero Coalition* to support the maritime industry's decarbonisation by collaborating with companies across the maritime, energy, infrastructure and finance sectors. The coalition's ambition is to help achieve the target set by the International Maritime Organisation to reduce Greenhouse Gases emissions from shipping by at least 50% by 2050 - compared to 2008 levels. The Coalition is aiming, through its members, at getting commercially viable deep-sea zero-emission vessels powered by zero-emission fuels into operation by 2030. The Getting to Zero Coalition was launched in September 2019 as a partnership between the Global Maritime Forum, the Friends of Ocean Action and the World Economic Forum. It comprises over 120 public and private organisations and has been endorsed by governments of 14 countries, including France and the UK.

- *Clean Skies for Tomorrow.* With air travel predicted to double by 2035, the aviation sector could represent a significantly higher share of GHG emissions by 2050 compared to its 2-3% share today. The Clean Skies for Tomorrow Coalition provides a crucial mechanism for top executives and public leaders, across and beyond the aviation value-chain, to align on a transition to sustainable aviation fuels as part of a meaningful and proactive pathway for the industry to achieve carbon-neutral flying. This coalition was launched in 2019 by the World Economic Forum, along with Airbus, Boeing, Air Transport Action Company, Shell, Heathrow and Schiphol airports.
- *Engagements pour une Croissance Verte* with the French Ministry of Ecology and Inclusive Transition and the French Ministry of Transportation in France, As part of these commitments, five key players in French biojet fuel (Air France, Airbus, Safran, Suez and TotalEnergies) are currently conducting a study to define the optimal conditions for producing and marketing clean fuels for air transportation.

Our shipping division closely monitors our contractors' emissions performance. In 2020, time-chartered ships navigated to economic speed as often as possible and thus reduced emissions. In addition, an effort is made to improve the energy efficiency of the fleet when the units are renewed.

Public policy engagement

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

[x] Direct engagement with policy makers
[x] Trade associations
[x] Funding research organizations
[x] Other

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
European Union 2030 objectives	Support	TotalEnergies supports the EU enhanced ambition on GHG emission reduction targets for 2030.	TotalEnergies advocates for a technology-neutral and coherent set of European rules and will follow up on the various proposals due in 2021.
European Green Deal	Support	TotalEnergies supports the ambition of the European Union to become climate neutral by 2050 and has taken the commitment to reach Net Zero across all its production and energy products used by its customers in Europe by 2050 or sooner (scope 1+2+3), together with society.	TotalEnergies is in favor of a green recovery package and is advocating for the introduction of a Carbon Border Adjustment Mechanism.

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Cap and Trade	Support with minor exceptions	TotalEnergies supports market-driven carbon emission reduction systems.	Strengthen international agreement for the limitation of GHG emissions through carbon market implementation and industry protection.
Flaring reduction	Support	In 2014, TotalEnergies joined the initiative launched by the World Bank and made a commitment to eliminate routine flaring from its operations by 2030.	TotalEnergies advocates the emergence of local regulations in producing countries in order to stimulate infrastructures and gas to power projects that would help to reduce flaring.
Methane regulation	Support	TotalEnergies supports policies to reduce methane emissions from natural gas production and consumption. In November 2019, TotalEnergies wrote to the US agency in charge of the environment (US-EPA), through a public consultation process, to oppose the projected lowering of regulatory requirements on methane emission control in the oil and gas industry.	TotalEnergies advocates for methane policies and regulations that incentive early actions, drive performance improvement, facilitates proper enforcement and support flexibility and innovation.
Carbon tax / Paying for carbon	Support	In 2014, TotalEnergies joined the call of the United Nations Global Compact, which encourages companies to consider a CO_2 price internally and publicly support the importance of such a price via regulation mechanisms suited to the local contexts. TotalEnergies is founding member of the Climate Leadership Council advocating for a carbon dividend mechanism.	TotalEnergies advocates the introduction of carbon pricing frameworks in all countries.

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

[x] Yes

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you influenced, or are you attempting to influence the position?
CEFIC (European Chemical Industry)	Consistent	CEFIC is a European chemical industry trade association. It supports the fight against climate change and the Commission's ambition to transform the EU into a competitive low carbon economy. The EU Emissions Trading System (ETS) is a key instrument in the implementation of this common ambition. The ETS reform provides a real opportunity to create a dynamic, flexible system for carbon leakage protection that would retain the current incentives while fostering companies that wish to invest and grow in the EU.	The head of the Refining & Chemicals business segment of TotalEnergies is a CEFIC Board Member. TotalEnergies also participates in various CEFIC working Companys on Energy and Climate.
Fuels Europe	Consistent	Fuels Europe recognizes that climate change is a global challenge, which requires global actions.	TotalEnergies participated in the Working Group on Transportation issues that published the Vision 2050 report (how to best mitigate and reduce GHG emissions of the refining sector and its products).
IOGP	Consistent	The International Oil & Gas Producers association supports the international community's commitment to address the global challenge of climate change. IOGP also believes that the Oil and Gas industry is very much a part of the solution to this challenge and that it can be addressed while meeting society's future energy needs.	TotalEnergies is an active member of the Energy & Climate working Company of IOGP.
IPIECA	Consistent	In support to the UNFCCC's work, IPIECA has launched, in November 2016, a report called "Exploring low-emissions pathways: Advancing the Paris Puzzle". This publication builds on IPIECA's 2015 Paris Puzzle, providing perspective on the common elements and enablers of pathways to meet a low-emissions future.	Florent Journet-Cuenot (TotalEnergies) was co-chair of the Climate Change working Company of IPIECA, who produced these two papers.
OGCI (Oil & Gas Climate Initiative)	Consistent	Launched in early 2014, the Oil and Gas Climate Initiative currently has 12 members: BP, Chevron, CNPC, Eni, Equinor, ExxonMobil, Occidental Petroleum, Petrobras, Repsol, Saudi Aramco, Shell and TotalEnergies. The vision of the OGCI is to become a more recognized and ambitious provider of practical solutions to climate change mitigation. The values of the OGCI are based upon a bottom-up, voluntary, industry-led initiative that encourages a wide range of actors in the oil and gas industry to work in a collaborative manner to deliver a tangible, credible, transparent and integrated contribution to climate change solutions.	TotalEnergies CEO is an active member of the OGCI CEOs Steering Committee. Until 2021, Jérôme Schmitt (TotalEnergies) was the chair of the Executive Committee of OGCI. Several people of TotalEnergies' corporate Strategy & Climate team are very active in this association.
ACC	Consistent	The American Chemistry Council has adopted a clear set of Climate Policy Principles. In particular, they express support to climate science, the goals of the Paris Agreement, carbon pricing, the development of renewable energies and CCUS.	The head of TotalEnergies Americas' Refining and Petrochemicals Business Unit is a member of the board of ACC.

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you influenced, or are you attempting to influence the position?
API	Inconsistent	The American Petroleum Institute is the main trade association for Oil and Gas in the USA. It considers climate change an important issue and is engaging to address this complex global challenge. However, API does not have an official position on Carbon pricing but has often been critical of putting a price on carbon. Also, API has supported the rollback of methane emissions regulations which TotalEnergies has opposed. Those divergences, which have been discussed within the association, remained in 2020, and in January 15, 2021, TotalEnergies announced its decision not to renew its membership.	TotalEnergies was the member of the API Climate committee and had a representative at API's board.created in 2020. TotalEnergies did not renew its membership for 2021.
EpE	Consistent	The French "Entreprises pour l'Environnement" association has published in May 2019 the "ZEN 2050" report about the feasibility of reaching net zero emissions in 2050 in France.	TotalEnergies' CEO is an active member of the board of EpE.
ERT	Consistent	The European Roundtable of Industrialists has an Energy Transition & Climate Change Working Company working on issues such as European energy security strategy and European policy framework for energy and climate change, including carbon pricing.	TotalEnergies' CEO is an active member of the ERT.
WBCSD	Consistent	The World Business Council for Sustainable Development has a Climate Policy Working Company focusing on issues such as Paris Agreement implementation, carbon pricing and Science-Based Targets (SBTs).	TotalEnergies has been actively involved on the subject of the TCFD with the WBCSD: TotalEnergies' CEO signed in 2017 the "CEO guide to climate-related financial disclosure" and in 2017 and 2018 TotalEnergies participated in the TCFD Oil & Gas Preparer Forum and the subsequent publication of the "Climate-related financial disclosure by oil and gas companies" report. TotalEnergies also participates to the working Company on Natural Climate Solutions.
CAPP	Inconsistent	The Canadian Association of Petroleum Producers is in principle supportive of climate-related subjects such as the elimination of flaring, the reduction of methane emissions and the development of CCS. However, their position lacks clarity on the subject of carbon pricing. Additionally, in their March 2020 letter to the Canadian government in the context of the COVID-19 crisis, CAPP took some public positions that are not aligned with our climate positions. In 2020, TotalEnergies therefore decided not to renew its membership for 2021.	TotalEnergies E&P Canada CEO had numerous exchanges with the association in 2019-2020, as a member of the Board of Governors.

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

[x] Yes

(C12.3e) Provide details of the other engagement activities that you undertake.

TotalEnergies actively engages with policy makers on climate change related issues and other topics through a number of either worldwide, European or national (i.e. French) trade organizations (IPIECA, IOGP, WBCSD, AFEP, ERT, MEDEF, UFIP, CEFIC, EUROPIA, CONCAWE, IDDRI…), and also as an individual company. For instance, in 2021, TotalEnergies continued to sponsor, at the Paris Dauphine University in France, a chair on the economics of climate.

TotalEnergies also supports the following organizations and initiatives:

- The World Bank's Zero Routine Flaring by 2030 initiative.
- The Climate and Clean Air Coalition's Oil & Gas Methane Partnership.
- The U.N. Global Compact's Caring for Climate initiative:
- The World Bank's Carbon Pricing Leadership Coalition.
- The French Business Climate Pledge, a commitment by 99 French companies to combat climate change.
- The Climate Leadership Council, which promotes a carbon dividends framework as a pragmatic solution to tackle climate change.
- A Coalition to Contribute to Universal Access to Energy, bringing together 25 international businesses and organizations.
- The coalition for the energy of the future which supports and accelerates the joint development of tangible energy solutions, therefore directly contributing to the reduction of carbon intensity of the transportation and logistics sectors (marine, road transportation...).
- Getting to Zero Coalition which supports the maritime industry's decarbonisation by collaborating with companies across the maritime, energy, infrastructure and finance sectors.
- The Terrawatt Initiative, which brings together key players in the private sector to promote affordable solar energy around the world.
- Clean Skies for Tomorrow coalition which provides a crucial mechanism for top executives and public leaders, across and beyond the aviation value-chain, to align on a transition to sustainable aviation fuels as part of a meaningful and proactive pathway for the industry to achieve carbon-neutral flying.

C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

TotalEnergies has adopted a lobbying ethics charter that is published on its website (www.totalenergies.com). It governs TotalEnergies' practices and ensures that our publicly stated positions are clearly communicated to our professional organizations or associations. The consensus required by these organizations does not always reflect our position. In such cases, TotalEnergies believes that it is preferable to promote its ideas from within by working to convince its peers of to adopt its position, rather than leave the discussions. TotalEnergies' participation in these organizations, beneficial in many ways including sharing of best practices, does not prevent us from publicly defending our positions, even when they differ from those of the organizations to which TotalEnergies belongs. In the event of a difference, TotalEnergies' position prevails. Mindful of the need to be fully transparent on climate-related issues, TotalEnergies is committed to publishing a list of all of the professional organizations and associations of which TotalEnergies is a member.

The Climate-Energy steering committee is a cross-functional committee, under the responsibility of the Director of the Strategy & Climate division and which includes representatives of diverse divisions such as HSE, Strategy & Climate (at corporate and business segments levels). Its aim is to coordinate, streamline and optimize the Company's climate change positions and engagement and the overall management of CO_2 policies around the world as well as to contribute to improving the energy efficiency of our installations by setting objectives and following the achievements. The Climate-Energy steering committee meets at least two times per year. It prepares the set of objectives for the Company in terms of emissions reduction. Then these objectives are approved by the Executive Committee. The Climate-Energy steering committee is TotalEnergies' main tool to ensure that our activities that influence policy are consistent with our overall climate change strategy.

Communications

(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	Status	Attach the document	Page/section reference	Content elements	Comment
In mainstream reports, incorporating the TCFD recommendations	Complete	TotalEnergies' 2020 Universal Registration Document	Chapter 3, p. 84-85, p. 95, p. 121-125 Chapter 5, p. 227-234	• Governance • Strategy • Risks & opportunities • Emissions figures • Emission targets • Carbon pricing	
In other regulatory filings	Complete	TotalEnergies' 2020 Form 20-F document	Chapter 3, p. 84-85, p. 95, p. 121-125 Chapter 5, p. 227-234	• Governance • Strategy • Risks & opportunities • Emissions figures • Emission targets • Carbon pricing	
In voluntary communications	Complete	TotalEnergies' Climate report - September 2020	Full report	• Governance • Strategy • Risks & opportunities • Emissions figures • Emission targets • Carbon pricing	

C15 Signoff

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

Job title	Corresponding job category
Patrick POUYANNÉ - Chief Executive Officer - Board chair	Board chair