



TotalEnergies

Sustainability Report

2023

TotalEnergies EP Denmark



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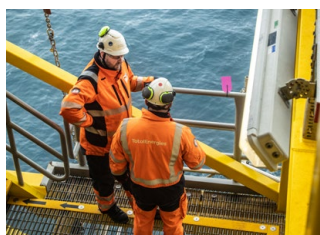
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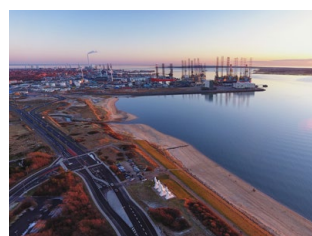
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Eric Delattre Managing Director TotalEnergies EP Denmark

# A message from the Managing Director

2023 was a year where our commitment to providing Denmark and Europe with a stable and reliable supply of oil and gas remained steadfast, underpinned by an unwavering dedication to more environmentally responsible production and operational excellence. We delivered significant progress in the hook-up and commissioning of the Tyra field, one of Europe's largest gas fields. Ensuring the safe start-up and subsequent ramp-up of production from this redeveloped field remains our top priority in 2024, enabling us to supply energy to Denmark and the rest of Europe.

While we – alongside society – continue to invest in renewable energy sources, the necessity of oil and gas remains crucial. These resources are still the backbone of energy consumption globally and in Denmark.

Ensuring that these essential resources come from the North Sea rather than

foreign sources is critical for Denmark. By harnessing our domestic resources, we enhance the country's energy security, support the Danish economy, and maintain a level of oversight and environmental stewardship that may not be possible with imports from overseas.

### Eliminate routine flaring

We pride ourselves on our increasingly environmentally conscious production. Through the dedication of our employees and company commitment, we have achieved significant advancements in reducing our carbon footprint while improving efficiency in mature assets through operational excellence. In 2023, we completed the re-route of Halfdan's production, which enabled us to eliminate routine flaring. This achievement results in substantial emissions savings and supports our company-wide goal of reducing global methane emissions from production by 80% from 2020 to 2030.

“By harnessing our domestic resources, we enhance the country’s energy security, support the Danish economy, and maintain a level of oversight and environmental stewardship that may not be possible with imports from overseas.”

### Exploring the North Sea’s future CCS potential

2023 marked a milestone as TotalEnergies completed the first-ever large-scale seismic survey in Denmark to explore the potential of utilizing a saline aquifer for CO<sub>2</sub> storage in the Danish part of the North Sea.

The Danish state awarded TotalEnergies two licenses to explore CO<sub>2</sub> storage potential in the North Sea. In 2023, TotalEnergies started conducting evaluation and appraisal work to develop a project that could ultimately transport and permanently store more than 5 Mt CO<sub>2</sub>/year by repurposing existing infrastructure and building new facilities.

### Meaningful partnerships with our local community

As one of the largest employers of Esbjerg, we are proud to support the local community. In the past year, we partnered with Education Esbjerg to transform Esbjerg into a center of

learning excellence. Our employees volunteer to mentor young professionals, preparing them to initiate their careers with confidence.

Building on our partnership with the Wadden Sea National Park announced in 2022, our employees have continued to help protect one of the most important wildlife habitats in Northwestern Europe by volunteering to build protective fencing for endangered bird species.

### Our people at the core

None of the above would be possible without our people. One of the highlights from the past year has been seeing a highly engaged organization come together to define a common culture through our strategic “Our People” project. This initiative has paved the way for how we now collaborate across our business.

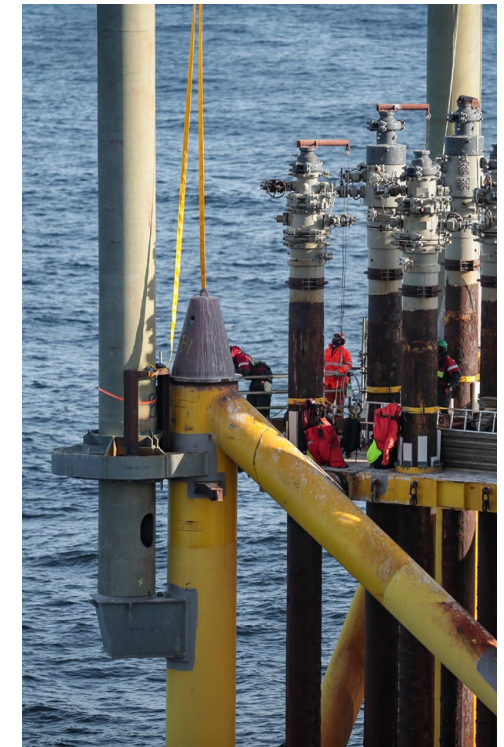
As ever, health and safety continue to be the cornerstone of our operations. Our utmost

priority is ensuring that everyone goes home safely every day. I am proud to report that our health and safety metrics have shown marked improvements over the past year. This achievement is the result of rigorous safety protocols, continuous training, and a key focus on the well-being of our workforce above all else.

As we look to the future, TotalEnergies EP Denmark remains committed to leading in the energy sector with responsibility and integrity. We will continue to provide Denmark with reliable oil and gas, produced efficiently and with respect for our environment and communities. Our journey towards sustainability is ongoing, and we are dedicated to making meaningful contributions towards a more sustainable energy landscape.

### Eric Delattre

Managing Director  
TotalEnergies EP Denmark



# What we do

TotalEnergies EP Denmark is the country's leading producer of oil and gas, enhancing energy security through efficient and safe North Sea operations and supporting the development of Carbon Capture and Storage (CCS) deep below the seabed.

## Offshore facilities

We operate the Danish Underground Consortium (DUC) with the partners BlueNord and Nordsøfonden.

- 49 platforms
- 14 fields
- 4 operational hubs
- 5 rigs

## Local suppliers

We work with suppliers to improve our supply chain's environmental impact, focusing on clean fuel and power for ships and helicopters. Key assets include:

- 4 helicopters
- 6 platform supply vessels
- 7 standby vessels
- 3 walk-to-work vessels
- 3 geotechnical vessels

## Onshore base

Our 800 employees based in the Esbjerg office provide onshore support for our North Sea operations, embodying our core values and contributing essential skills to our business.

## Partnerships and collaborations

We actively engage with the Esbjerg community to support and protect the region's unique values and assets.

## CCS activities

Together with other TotalEnergies entities and the DUC partners, we are developing CO<sub>2</sub> storage in the Danish North Sea, capable of storing millions of tons of CO<sub>2</sub>.

CO<sub>2</sub> ↓

↑ oil gas

## Pipelines

Over 700 kilometers of pipeline ensure the safer production, processing, and transportation of oil and gas to Denmark.

- 3 active gas export pipelines (owned by 3rd party)
- 1 active oil export pipeline

## Deliveries

1.1 Mt oil eq gas  
2.5 Mt oil

# Our sustainability ambition

TotalEnergies EP Denmark's sustainability strategy is structured around four pillars which support the Company ambition to build the sustainable energy systems of tomorrow while continuing to supply the energy the world needs today.

During 2023, TotalEnergies EP Denmark adopted an action plan with targets to be reached by 2025. Under the name Sustainab'ALL, this plan describes how we contribute materially to the four pillars outlined below.

Nordsøfonden (20%). Numbers and targets in this report<sup>1</sup> include total DUC activities and not just TotalEnergies' 43.2% equity share.

In Denmark, our operations are carried out as operator for and part of the DUC together with our partners BlueNord (36.8%) and



## Climate and Sustainable Energy

### Ambition:

Our ambition is to be a major player in the energy transition and reach net zero by 2050, together with society, by taking steps to:

- Reduce emissions from our operated industrial facilities (Scopes 1+2)
- Reduce indirect emissions associated with the use of our products (Scope 3)

### Focus areas:

- Consume less and consume better energy within TotalEnergies
- Promote climate responsible suppliers
- Innovate in support of our transformation
- Develop carbon storage solutions



## People's Well-Being

We want to set the benchmark as an employer and responsible operator. To that end, we endeavor to:

- Ensure people's safety
- Uphold human rights in our operations and those of our suppliers
- Put our employees at the heart of our transformation

- Develop our people's engagement
- Enhance the skillset of our people to ensure the successful transformation of our business
- Advance inclusion in our Company



## Care for the Environment

We want to mobilize our operational excellence on behalf of nature and the environment. To do that, we have identified three priorities:

- Act for biodiversity
- Preserve water resources
- Be a player in the circular economy

- Promote circular economy in our operations
- Mobilize the Company for biodiversity



## Creating Shared Value

We want to create shared value for a just transition by:

- Making commitments to all of our stakeholders
- Ensuring accessible, affordable energy for all
- Sharing the economic value we create

- Create prosperity in the territories where we are present



<sup>1</sup> This Sustainability Report 2023 constitutes a voluntary report issued on behalf of the operator of Danish Underground Consortium in Denmark, TotalEnergies EP Denmark. To see the mandatory sustainability reporting according to Danish and European legislation, please refer to the corporate TotalEnergies Sustainability & Climate 2024 Progress Report or the Company's Universal Registration Document both available on the corporate website <https://totalenergies.com> or consult the Annual Accounts for the Danish affiliates available at <https://virk.dk>.

# 2023 highlights

A year of continued progress within the sustainability area.



## Reducing our emissions

Building on our efforts to reduce our carbon footprint, we started to deliver on our various reduction projects, including one to re-route production and thereby eliminate routine flaring.

[Read more →](#)



## Unleashing biodiversity data

Establishing a new partnership to consolidate and communicate more than 30 years of data on environment and biodiversity trends around our installations in the North Sea.

[Read more →](#)



## Getting home safe every time

Slightly improving our safety performance in 2023 despite a significant increase in hours worked due to the final stages of the Tyra Redevelopment Project in the North Sea.

[Read more →](#)



## Actioning our biodiversity plans

Outlining our biodiversity related activities to conserve biodiversity in sensitive areas, ensure regulatory compliance, and enhance stakeholder communication.

[Read more →](#)



## Elevating employee engagement

Raising awareness of opportunities for personal development through training, career development and coaching, and placing emphasis on common culture and Company values.

[Read more →](#)



## Working with the Wadden Sea National Park

Strengthening our collaboration with the Wadden Sea National Park, such as fencing breeding areas for endangered birds.

[Read more →](#)



## Strengthening community relations

Supporting the local community with their educational efforts and mentoring young students taking the first steps in their career whilst helping them build a local network.

[Read more →](#)



## Developing carbon storage solutions

Leveraging Denmark's geological advantages and maritime expertise, we were granted two exploration licenses to develop carbon storage in the Danish North Sea.

[Read more →](#)

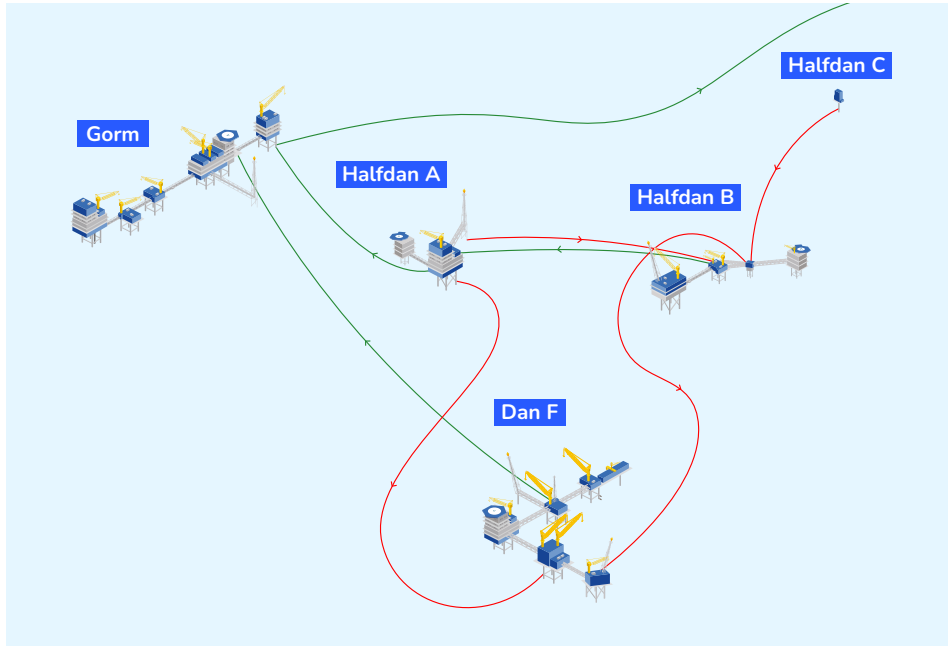


# Climate and Sustainable Energy

TotalEnergies' ambition is to be a major player in the energy transition and achieve net zero by 2050, together with society.

# A continued effort to reduce emissions

Our corporate climate ambitions were significantly strengthened in 2019 and have made considerable progress since then, contributing to the global targets for 2025, 2030 and ultimately net zero by 2050. These efforts include a commitment to reduce emissions and energy consumption across all aspects of the operation, which will make the organization more sustainable.



Many of DUC's installations are interconnected on the seabed – in fact, more than 700 kilometres of pipeline ensures that the network of production, processing and transportation of oil and gas to Denmark runs in a reliable and responsible way. This means that activities and events on one facility can have an impact on multiple sites.

At the Gorm field, DUC's oil production is processed and shipped to shore for distribution to the Danish consumers. In 2020, a project was initiated to re-route oil production from the Halfdan field to Dan F rather than Gorm. The aim was to reduce routine flaring. In 2023 we completed the second stage of the project and eliminated routine flaring from our operations.

Until 2017, the oil produced at the Halfdan field was degassed on Gorm Field and the gas was processed in a tandem compressor and then used as fuel gas. The 40-year-old compressor was designed for a production volume that was much higher than today's level. The compressor was damaged beyond repair in 2017. The fuel consumption of the compressor and the compressor demand was similar, meaning that either the gas is burned as fuel gas in the compressor driver or a similar gas volume is flared routinely. The routine flaring solution was assessed to be the safest and most environmentally responsible in the situation.

In parallel, new regulations came into force in Denmark requiring routine flaring to end by July 1, 2023.



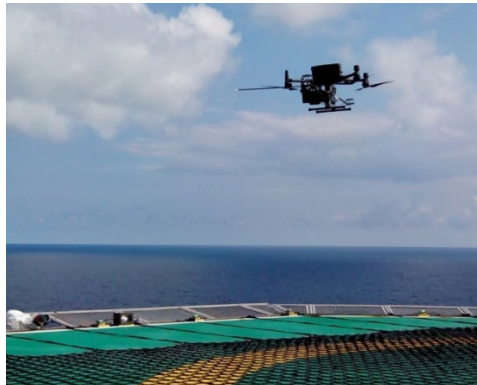
## Flare systems

Flare systems are installed on all oil and gas facilities to ensure safe disposal of excessive gas during operations and safety incidents. According to World Bank's Zero Routine Flaring Initiative, the flare can be split into three categories.

**Safety flaring:** Flaring to ensure safe performance of operations conducted at the production sites (emergency shutdown, safety-related operations, etc.).

**Non-routine flaring:** Flaring other than routine flaring or safety flaring associated with oil production and occurring primarily during occasional or intermittent events.

**Routine flaring:** Flaring during normal production operations in the absence of sufficient facilities or adequate geological conditions permitting the reinjection, onsite utilization, or commercialization of produced gas (as defined by the working group Global Gas Flaring Reduction program as part of the World Bank's Zero Routine Flaring Initiative). Routine flaring does not include safety flaring.



“It is a continuous balance between being on top of safety and integrity, and ensuring security of supply while at the same time reducing GHG emissions.”

– Susanne Frederiksen, Carbon Footprint Reduction (CFR) Manager

“Initially we thought that the timeline was a bit tight, and a more realistic timeline would be to stop routine flaring by the end of 2023. However, we made it a priority, allocated resources, accelerated the process, and managed to achieve our goal by July – just five days after the new regulation came into force,” says Susanne Frederiksen, Carbon Footprint Reduction (CFR) Manager.

In the case of Halfdan, a partial re-route was already initiated in February 2022, which reduced routine flaring by about half. The full re-routing, resulting in the end of routine flaring and a reduction of about 20,000 tons per year of CO<sub>2</sub>e emission, which is equivalent to a 50-kilometer commute by more than a million cars<sup>2</sup>.

### Using drones for methane reporting

Several other projects led to improved emissions performance in 2023. Quantitative Leak Detection and Repair (QLDAR) was conducted regularly as well as on as-needed basis on all our operating installations using OGI (Optical Gas Imaging) cameras based on infra-red sensing technology. This in itself improved our reporting of fugitive emissions and resulted in a Greenhouse Gas (GHG) reduction of 22.3 ktons of CO<sub>2</sub>e for that year.

Drone surveys to measure methane and CO<sub>2</sub> emissions were also repeated in 2023 after being conducted in 2022 on all our operating

platforms and satellites as well as flares. Another initiative that contributed massively to improving methane reporting was detailed flare and vent source mapping. This was key to identify areas we can improve and initiate new projects for the purpose of methane reduction.

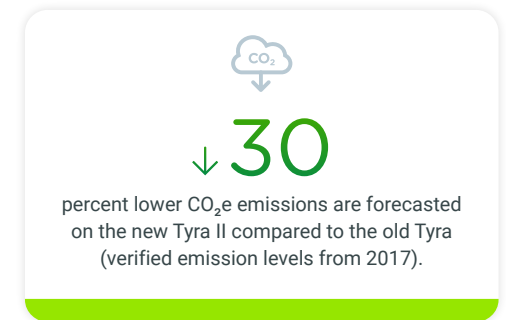
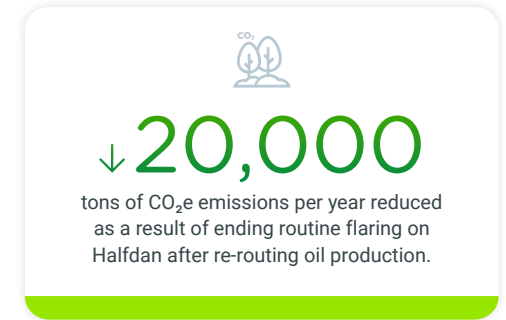
In 2023 we started the publication of a Carbon Footprint Reduction page on the TotalEnergies EP Denmark intranet and quarterly newsletters to offshore workers. These initiatives were to raise the awareness of all employees and contractors on and offshore. A local seminar was held to engage and share best practices and projects to reduce emissions.

Much can be achieved by a strong organization with a focus on delivery and awareness. “It’s a matter of prioritization and focusing on the strength of the organization,” Frederiksen says, looking back at the Halfdan re-route. “When we focus on a task, and put in the resources and commitment, we can react quickly and reach significant achievements. But it is a continuous balance between being on top of safety and integrity, and ensuring security of supply while at the same time reducing GHG emissions,” adds Frederiksen.

### Helping suppliers to improve

Our efforts do not stop at our own facilities. We are also in dialogue with our suppliers on how to improve the footprint of the significant supply chain for our oil and gas activities.

### Key actions in 2023



<sup>2</sup> Calculated using [co2.myclimate.org](https://co2.myclimate.org).



In 2023 studies and pre-projects were conducted to be ready for implementation in 2024 focusing on clean fuel and power for supply ships and helicopters.

## Energy management certification

The Energy Management System of TotalEnergies EP Denmark was certified by

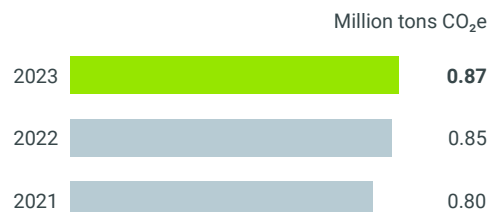
an independent third party to comply with the ISO 50 001 Energy Management System standard in March 2023.

This ISO 50 001 standard provides a practical way to understand and improve energy use based on a system of continual improvement which makes it easier for organizations to integrate energy management into their overall efforts to improve energy efficiency.

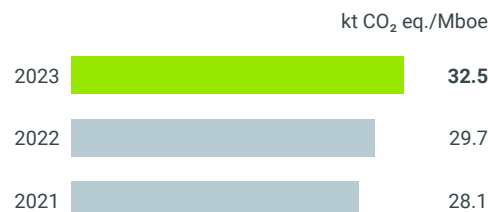
TotalEnergies EP Denmark achieved this through a review and rollout of an updated energy management system, allowing for continuous improvement of energy performance, including energy efficiency and energy consumption.

Danish law requires regular assessment of energy consumption, and the ISO certification was selected as it is a good indicator of how we are doing and shows our level of commitment to emissions reduction.

### GHG emissions 2021–2023



### GHG intensity 2021–2023



## Energy efficiency on Tyra II

The redevelopment of the Tyra gas hub is the biggest offshore engineering project carried out in the history of the Danish North Sea. When the new facilities are fully back on stream, the largest gas field in Denmark will be able to deliver gas to Denmark and Europe with an optimized carbon footprint. Thanks to new design, high-tech equipment, new processes and optimization via more than 100,000 data points, the gas sent to Denmark is expected to have a production footprint of 12-16 kg CO<sub>2</sub>e per barrel compared to a current average of approximately 30 kg CO<sub>2</sub>e per barrel across our current North Sea installations. Total annual emissions (Scope 1) are forecasted to be 30% lower (approx. 315,000 tons) compared to 2017 before the production of the field was temporarily shut in, an outcome of lower production volumes and the optimized carbon footprint.

See the film about the redevelopment of Tyra II [here](#).



Reusing the existing facilities is an important part of the Bifrost CCS project. Here, the Harald platform where injection is planned to take place from 2030.

# Establishing a strong operational base for offshore CCS

Carbon Capture and Storage (CCS) has been pinpointed as an important technology to achieve climate neutrality in 2050, by both EU and the International Panel on Climate Change (IPCC). Denmark has particularly favorable conditions for developing CCS solutions thanks to the underground geology, its maritime history and strong offshore competencies.

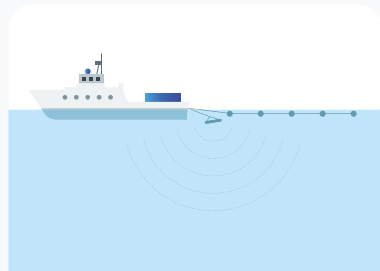
In 2023, TotalEnergies in Denmark was granted two adjacent exploration licenses as part of the Bifrost Project to develop carbon storage in the Danish North Sea. One area covers the existing gas field of Harald while the other is an adjacent underground sandstone formation containing saline water. TotalEnergies EP Denmark is supporting the operational aspects of our Danish CCS ambition. The plan is to store a minimum of five million tons of CO<sub>2</sub> annually in the Bifrost storage by 2030, and a robust work program has been designed to bring the parties forward to that goal.

## The Bifrost Project

The Bifrost project consists of multiple sub-elements with different participants:

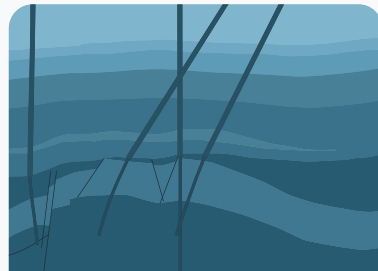
- An EUDP supported study developing a concept for storage at the depleted Harald gas field. All DUC partners are part of the project.
- A commercial project aiming at storing CO<sub>2</sub> in the Harald field. This project is owned 80% by TotalEnergies and 20% by Nordsøfonden.
- A commercial project aiming at storing CO<sub>2</sub> in an aquifer next to the Harald field. The project is owned 80% by TotalEnergies and 20% by Nordsøfonden.

## Main milestones towards First injection in the Bifrost project by 2030



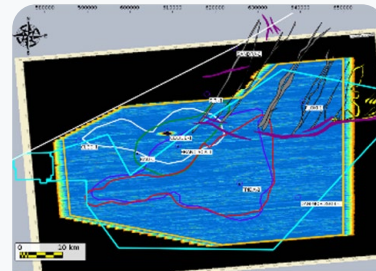
2023

Exploration licenses  
Seismic studies



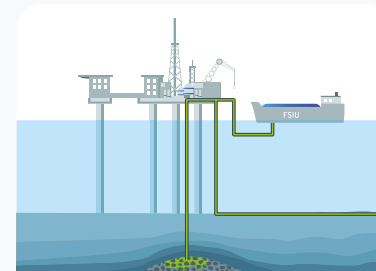
2024

Geophysical surveys



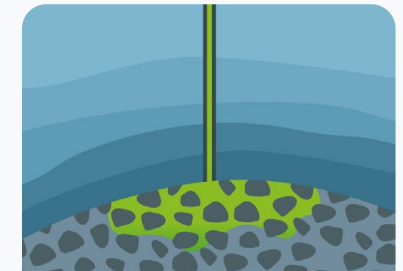
2025

Well investigations and  
scale-up potential



2025-2027

Storage license and  
FEED\*



2030

Storage initiated

\* Front End Engineering & Design

As the first major part of the work program, a major seismic study of the saline aquifer covering 2,260 km<sup>2</sup> was conducted during the 3rd quarter in 2023. Here, seismic waves were transmitted into the Earth's crust to capture invaluable geological information.

Geoscientists are now analyzing the results of the CO<sub>2</sub> storage capacities in the saline aquifer of Bifrost, and this work will form the basis of establishing the first exploration well in 2025 in order to further assess and validate the storage potential.



# People's Well-Being

TotalEnergies wants to set the benchmark as an employer and responsible operator.



# Focus on employee engagement

TotalEnergies EP Denmark made a concerted effort in 2023 to work on employee engagement. This focused on raising awareness of opportunities for personal development through training, career development and coaching, explaining processes, enhancing feedback, and placing emphasis on a common culture and the Company's values.

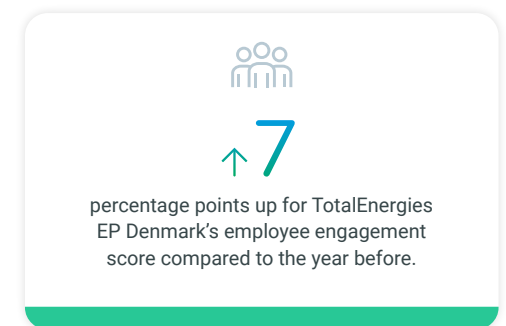
In 2023, TotalEnergies EP Denmark's employee engagement reached its highest level yet – rising seven percentage points compared to the year before.

This follows the introduction of key initiatives in Denmark, such as the "Our People" project, the Ambassador program, and the HR Talks series.

In the years prior, the organization had gone through several waves of significant change – reorganizations, an acquisition, a pandemic, an energy crisis and more – which impacted employee engagement.

"We realized engagement was low for various reasons, so we systematically worked with

employees to address this issue. Working with our employees was key to address the concerns," says Jennifer Stien, Human Resources Manager.





“We knew that in order for change to take place and to be embedded in the organization that everyone needed to be part of the “Our People” project.”

– Jennifer Stien, Human Resources Manager

## Opening a dialogue

At the beginning of 2023, the “Our People” project was launched as a strategic priority for the year. Its primary objective was to improve organizational culture, enhance employee retention, boost engagement levels, and attract talent. The reasoning behind this initiative stemmed from a concerning decline in engagement rates observed during the 2022 employee survey, coupled with an increased turnover rate.

The project started with a thorough analysis of the current state of employee engagement, based on past survey results and exit interviews, to establish a sound foundation. It continued through a series of focus groups and direct employee feedback sessions.

“We knew that in order for change to take place and to be embedded in the organization that everyone needed to be part of the “Our People” project,” explains Stien.

The HR-related work streams flagged a lack of awareness of our training opportunities, mobility and career paths, and compensation and benefits programs. The HR Talks series was launched to address this.

The HR Talks are regular updates to the organization to share information on the HR campaigns and processes which impact the employees. This allows us to stay in dialogue

with employees and understand the areas which concern them most.

“We knew we had to promote HR’s services as people didn’t have enough information on what we did or what we could offer them in TotalEnergies,” says Stien.

Helping the organization in this way has led to a better collaboration between HR and employees and has fed back into employee engagement and future initiatives.

## Ambassador program

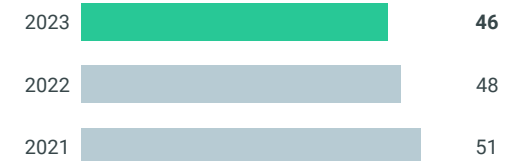
The HR team also established an Ambassador program to promote TotalEnergies EP Denmark through their presence and engagement at various external events.



## % of women in workforce



## Number of nationalities





The ambassadors were selected from different departments for their experience, knowledge, and enthusiasm. They attend university career days, community meetings and more to talk about the Company's role in society and share insights about their own jobs and careers.

The program has enhanced TotalEnergies EP Denmark's visibility and engagement with the local society and deepened the ambassadors' connection to the Company and their work.

### Development potential

The local initiatives which we implemented complement the company-wide Better Together program, with everyone contributing to building a good place to work. The core message of Better Together is that each person has unique talent to be developed and is based on three dimensions: developing individual talent, promoting manager-coaches, and building a good place to work.

As part of this, we now offer five training days per year, three of which can be used for personal development without requiring manager approval. To enhance performance feedback, we have implemented 360° reviews, allowing feedback from across the organization. Additionally, about 70 employees have completed day-to-day Manager-Coach training.

# Getting everyone home safe every day

After a challenging start to the year, the safety performance of TotalEnergies EP Denmark slightly started to improve as the year progressed despite a high amount of hours worked under the final stages of the Tyra Redevelopment Project.



During 2023, various initiatives were launched to address the increase in workforce and influx of new contractors as part of the Tyra project. Since a portion of the employees were less experienced in safety protocols, special attention was given to addressing this gap. This involved raising safety awareness during simultaneous operations and enhancing understanding of the increased safety requirements when transitioning from a shut-in platform to an operational platform with flammable substances and other new risks.

An example of one of focus areas in 2023 is the safety observation system. As part of our safety initiatives to protect our people, daily operations, and assets, we utilize observation cards. Our employees at both onshore and offshore sites can submit an observation card when they witness an unsafe act or condition, as well as when they observe positive safety behavior. This process allows us to enhance safety awareness in our day-to-day activities and to continuously learn from each other.

One of the observation cards submitted in 2023 was from a contractor's employee who was on Tyra East for the first time. He had noticed two signs detailing the site's escape routes pointing in opposite directions.

As a result, the signs were aligned and the contractor had helped improve the safety on site so that if an emergency should occur, the escape routes were clearly displayed.



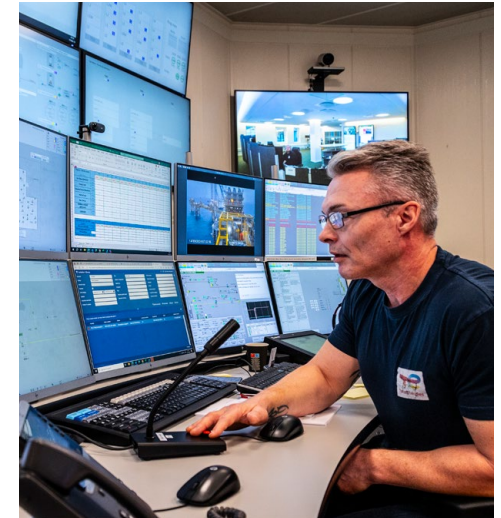
“Safety is dynamic so it’s always evolving, and the observation cards are a key tool to prevent major incidents on our installations.”

– Tony Saraiva, Operational Safety Manager

“Observations vary hugely. It could be a tripping hazard, which you review and fix and then close. Some observations avoid a major risk in an ongoing job. Safety is dynamic so it’s always evolving, and the observation cards are a key tool to prevent major incidents on our installations,” explains Tony Saraiva, Operational Safety Manager at TotalEnergies EP Denmark.

comes home safe. The observation cards are merely a fraction of numerous measures that highlight the importance we place on safety here at TotalEnergies. It’s a clear demonstration of how safety is a daily priority, approached with dedication and careful attention by every member of our team. Safety is not just a procedure to follow but a deeply ingrained mindset that guides our actions and ensures the well-being of everyone in our company.

Our contractors received a Monthly Safety Recognition Award for raising the issue of the confusing signs. These awards are another way in which TotalEnergies EP Denmark raises awareness of safety and addresses potential issues before they can become a problem. Anyone – offshore or onshore, employee or, contractor and guest – is expected to follow our procedures and speak up.



### Safety as a core value

Safety is one of TotalEnergies’ core values, a company-wide commitment to ensure that there are zero fatal accidents and that everyone

### Recognizing good safety behavior

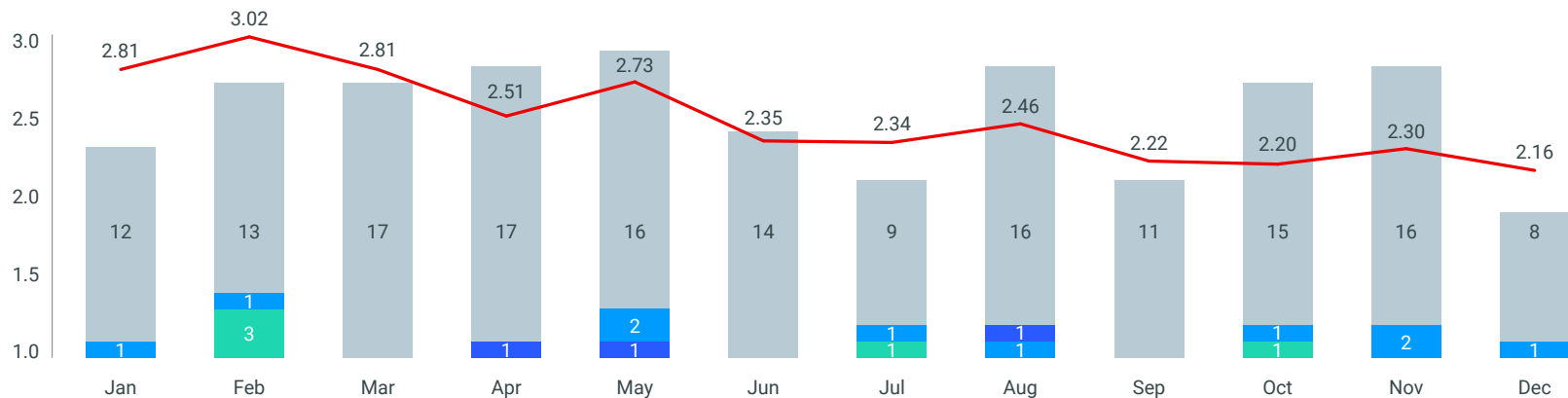
Recognition is one of the keys to achieving the highest possible level of safety performance.

While TotalEnergies EP Denmark recorded a slight downward trend of total recordable injuries in 2023, there is always more that can and needs to be done to ensure everyone returns home safely every time.

### A slightly improving safety performance

■ Lost Time Injury   
 ■ Restricted Work Day Case   
 ■ Medical Treatment Case   
 ■ First Aid Case   
 — Case Total Recordable Injury Rate (rolling 12 months)

Injury per million working hours





“We had five lost time incidents in 2023 and that’s five too many. I’m satisfied with our operations but we’re still far from our objectives. We can still improve a lot on our safety performance,” Saraiva says.

### Safety culture on site

Another focus area in 2023 was safety culture on site. TotalEnergies EP Denmark has focused on evaluating human and organizational factor practices offshore that influence the safety culture on our installations. These Safety Culture Workshops are delivered to all our offshore workforce including all employee and contractor leaders and crew.

The aim is to improve hazard and situational awareness by refreshing and emphasizing already existing tools such as toolbox talks, life-saving checks, risk assessment and Safety Green Light. Coaches spend time on the platforms, conducting safety and leadership workshops and raising skills levels through safety conversations and interventions. They coach in areas such as toolbox talks and debriefs, including one-on-one sessions, they also make platform observations and participate in joint safety tours and permit audits.

### More than 2,800 workshop participants

Our Safety Culture Improvement program aims to enhance confidence to act as safety

coaches and leaders of others, improve the quality of safety conversations and understand how communication style and mindset can affect others. The goal is to take ownership of safety by looking out for each other and feeling empowered to intervene.

More than 2,800 people have taken part in the safety culture workshops. Both employees and contractors are also actively participating in raising observation cards. More than 22,000 observation cards were raised in 2023, of which 16,000 were potentially unsafe observations.

“The program was viewed very positively on site. The basis of its success was that people came out to the assets, and it wasn’t in a meeting room or on a computer in an office,” details Saraiva.

### Lost time injury rate



### Total recordable injury rate



**5**

lost time incidents (LTI) in 2023, which exceeds our objective.





# Care for the Environment

TotalEnergies is mobilizing its operational excellence on behalf of nature and the environment.

# Mapping out biodiversity in the North Sea

The North Sea and its rich ecosystems have long been a focal point for environmental research. Understanding the complex life beneath its waves is crucial for the sustainable development of the energy industry whilst minimizing its impact on marine ecosystems – and a new portal with TotalEnergies EP Denmark as the initiator will consolidate decades of environmental data to provide a comprehensive resource accessible to everyone.



What role do platform structures play in supporting sea life? Which areas are likely to be sensitive to future developments?

We will soon be able to answer those questions based on collated data going back decades that will be shared on the web-based North Sea Environmental Portal being developed by TotalEnergies EP Denmark on behalf of the DUC and the research and technology institute Dansk Hydraulisk Institut A/S (DHI). Work to develop the portal began in 2023 and the final product is expected to be ready by the end of 2024.

“We are the first operator choosing to do that in Denmark and we hope that others will join us to enhance this portal and make it even more exhaustive,” says Katrina Povidisa-Delefosse, Senior Environment Advisor and PhD in marine biology.

The DUC has monitored the marine environment and collected large amounts of data on seabed conditions, water quality, fish, mammals, benthic animals, and plants since the 1980s. This data has been continuously reported to the authorities but until now, has not been easily accessible to researchers and the public.

The new portal will provide a holistic view of environmental and biodiversity developments going back decades, enabling researchers and other users to spot trends, make predictions, and base decisions on a solid factual foundation. The portal will be open for use by anyone, opening the bigger picture of



“The North Sea is brimming with life, and this data set will enable that to be fully charted for the benefit of all. We aim to demystify the environment around oil and gas platforms and show people exactly what is happening beneath the waves and how these structures can support marine life.”

– Katrina Povidisa-Delefosse,  
Senior Environment Advisor

what is happening on and beneath the waves in the Danish part of the North Sea.

“The North Sea is brimming with life, and this data set will enable that to be fully charted for the benefit of all. We aim to demystify the environment around oil and gas platforms and show people exactly what is happening beneath the waves and how these structures can support marine life,” Povidisa-Delefosse says.

### A collaborative data hub

The combined information will provide a solid foundation for developing robust plans to protect the marine environment.

This is becoming ever more important with the expected expansion of wind farms, CO<sub>2</sub>

storage and many other new developments offshore – as highlighted by a recent Danish political agreement on the expansion of 9 gigawatt of offshore wind farms, which has set stricter requirements for sustainability and monitoring of the seabed.

TotalEnergies EP Denmark has worked with authorities so that the data can be easily used for reports. For now, the North Sea Environment Portal includes data only from TotalEnergies on, for example, sea bottom fauna, chemistry, and marine mammal monitoring. However, the platform is being built in a modular way so more themes can be added as the project and future data collection progress. Thanks to the existing data foundation, it will serve as a retrospective archive of data, painting a historical picture of the North Sea over the years.

The hope is that stakeholders with an interest in the North Sea will use the portal and contribute their own data.

“I like to think of the portal as an office building where we have rented one floor with all our data. We invite others in to occupy other floors, and the more people we have coming to stay with us and share their knowledge with each other, the better,” Povidisa-Delefosse says.

It’s important to note that environmental monitoring data holds no commercial confidentiality concerns. Its true value is unlocked when it is aggregated and shared, enhancing its utility and impact. The test portal is fully operational and the complete system rollout is scheduled for the latter part of 2024.

**The portal will, among other factors, document the following:**



#### Seabed chemistry

The chemical composition and properties of the seabed, including organic compounds and nutrient levels present in the sediments.



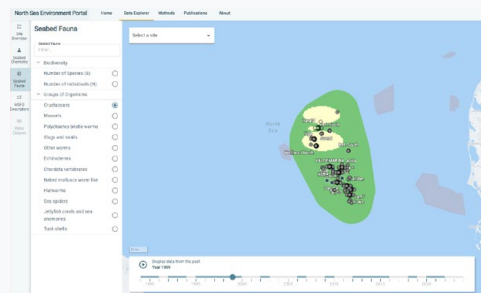
#### Biodiversity

The variety and quantity of life forms within the marine ecosystem near the DUC’s offshore oil and gas operations.



#### Ecological indicators

The specific species, groups of species, or biological traits used to assess the state of the environment and the impact of human activities.



### Actioning our biodiversity plans

A Biodiversity Action Plan (BAP) has been put in place for TotalEnergies EP Denmark, outlining biodiversity-related activities until 2029 and is in line with a wider Company initiative for all affiliates to have one by 2025.

The BAP targets the conservation of biodiversity in sensitive areas, adhering to IUCN\* and Ramsar Convention guidelines. It conducts an impact analysis to guide future projects, ensures regulatory compliance, sets conservation priorities, and creates local action plans. The BAP also emphasizes the importance of communication with stakeholders to achieve its objectives effectively and enhance the general biodiversity awareness.

\* IUCN – International Union for the Conservation of Nature

## Offshore installations are wildlife hotspots

In parallel, marine scientists from the Technical University of Denmark (DTU), Aarhus University's Department of Ecoscience and TotalEnergies have kicked off a new biodiversity study around the North Sea platforms to expand knowledge on the role that offshore installations play in sheltering marine life.

The team of researchers set out on their North Sea mission in the summer of 2023.

Amidst the salty waves, the team collected samples and video material monitoring fish abundance around the Skjold platform. They also placed an array of high-tech underwater

sensors that will record the presence of tagged cod and vocalizing harbor porpoises during the next year. In 2024, the sensors will be removed, and the complex data will be analyzed for us to better grasp how wildlife interacts with our installations.

This scientific study observes the behavior of cod, other fish, and marine mammals like harbor porpoises around our offshore platforms. The goal is to understand the platforms' function as feeding and spawning grounds.

"Platforms play a significant role as wildlife hotspots, and we want to understand the mechanisms behind it better," says Povidisa-Delefosse.



See the film about the new biodiversity study around the North Sea platforms [here](#).



## A company-wide commitment

Biodiversity research is not only making waves in Denmark.

TotalEnergies has, on a global scale, pledged to contribute to the United Nation's Sustainable Development Goals (SDGs), including those related to biodiversity conservation.

The Company actively works with the SDGs through the internal Sustainab'ALL program. It was implemented in 2023, and every site across the globe was tasked with defining an action plan to be met by 2025.

In addition to our Sustainab'ALL program, our worldwide biodiversity commitments include respecting our voluntary exclusion zones, managing biodiversity in our new projects and existing sites, and promoting biodiversity as part of our activities, e.g. through the employee volunteer program, Action!.



# Creating Shared Value

TotalEnergies wants to create shared value for the local community.



# Strengthening our community relations through local partnerships and engagements

As one of the largest employers in Esbjerg, we are proud to support the local community with their educational efforts, conserving local wildlife in the Wadden Sea National Park and allowing employees to volunteer for a good cause during working hours.

In May 2023, TotalEnergies EP Denmark joined forces with Education Esbjerg in an innovative initiative aimed at transforming Esbjerg into a center of learning excellence. This partnership aims to further integrate TotalEnergies with the local community and attract talented university students to join as future innovators in the energy sector.

Originally launched in January 2020, Education Esbjerg is a link between students, educational institutions, companies, and the

municipality. The organization's mission is to transform the city into a beacon of education to inspire a new generation to learn and live in Esbjerg and its surrounding communities.

## A foundation for mutual growth

One of the ways we contribute to Education Esbjerg is through the mentor concept, E.1. Here, TotalEnergies employees mentor young students from Esbjerg's educational



“Engaging with the local community and upcoming graduates is crucial. It fosters idea sharing, collaboration, and mutual value creation. I am honored to contribute to this initiative and represent TotalEnergies Denmark.”

– Kimia Sadeghi, volunteer mentor

institutions, allowing the next generation to benefit from building a local network and enhancing their career prospects.

The initiative gained momentum in the autumn of 2023, with mentors ready to share their wisdom with students nearing the completion of their academic paths.

Kimia Sadeghi, Senior Recruitment Partner in HR, volunteers as a mentor: “Joining Esbjerg’s mentoring program has been immensely rewarding. It’s a fantastic scheme that pairs students with seasoned professionals from the business sector, equipping them for their future careers. As mentors, we also grow by widening our networks, honing our coaching abilities, and gaining fresh insights from the students.”

With seven TotalEnergies EP Denmark mentors now collaborating with students,

the program promises a dynamic exchange of knowledge and expertise, enhancing the mentorship experience for all involved. It allows us to learn from the next generation and to nurture talented and motivated individuals who are looking to shape a career in the energy sector.

“Engaging with the local community and upcoming graduates is crucial. It fosters idea sharing, collaboration, and mutual value creation. I am honored to contribute to this initiative and represent TotalEnergies Denmark,” continues Kimia.

Our global volunteering program, Action! also underpins these community ties. Mentors can dedicate time and take up to three working days off annually to participate in local community activities.



165

people visited our office for educational purposes.



6

visits to educational institutions.



4

career fairs to meet students and upcoming graduates.

TotalEnergies EP Denmark has established a grievance mechanism accessible at <https://corporate.totalenergies.dk/contact>

## Conserving local wildlife

In 2023, employees could donate their time to a biodiversity project benefitting endangered species in the Wadden Sea National Park around Esbjerg. The project involved putting up fences to safeguard bird populations and promote breeding in the Wadden Sea area – and it seems to work. The 2023 breeding season celebrated a record number of Little Terns nesting in the Blåvandshuk area.

Conny Villadsen, HSE Assistant, describes her experience participating in the Action! initiative: “I very much enjoy participating in the Action! program, and the event last year to fence a bird breeding area at Blåvand beach was no exception. In fact, it was really an eye opener as to how we as human beings

interfere with the wild birds’ nesting. They don’t have a chance if we don’t ensure peace while nesting. I will certainly participate again.”

The volunteering initiatives with the Wadden Sea National Park also includes removing the fencing, and we have already made plans to return in 2024.

To create engagement and a deeper understanding of the important wetland, TotalEnergies EP Denmark organized an experience day where approximately 150 employees and their families spent a day out in the Wadden Sea National Park. Professional guides provided insights, stories, and explanations about the Park’s treasures.



## Action! program highlights

The Action! program empowers every employee to contribute to local causes, offering up to three days of volunteer work annually. These efforts support various community projects, from aiding disadvantaged children to promoting STEM education and preserving natural habitats. TotalEnergies EP Denmark places great importance on community engagement, and Action! is a testament to our dedication to enacting positive local change.



108

employees dedicated over 250 hours to volunteering, and participated in more than 11 distinct initiatives within TotalEnergies EP Denmark in 2023.

# 2023 – progress and challenges

TotalEnergies EP Denmark’s operations are situated in the harsh environment of the North Sea and this sets the scene for our focus on safe, reliable and environmentally responsible operations.

Most of our offshore installations were constructed many years ago and were built for a significantly higher output of oil and gas. In this context, our goal is to operate our mature offshore installations in the safest, most energy efficient manner, with the lowest possible adverse impacts on air, sea and land, both locally and globally.

## Climate and Sustainable Energy

	Unit	2021	2022	2023
<b>GHG emissions<sup>1</sup></b>				
Total CO <sub>2</sub>	Mt CO <sub>2</sub>	0.73	0.79	0.82
CH <sub>4</sub>	kt	1.99	1.91	1.18
GHG emissions	Mt CO <sub>2</sub> e	0.80	0.85	0.87
GHG intensity	kt CO <sub>2</sub> eq./Mboe	28.1	29.7	32.5
<b>Other emissions</b>				
NO <sub>x</sub>	Tons	3,428	4,117	3,142
nmVOC*	Tons	1,602	1,507	584
SO <sub>x</sub>	Tons	39	46	84
<b>Sources of CO<sub>2</sub> emissions on production platforms</b>				
Fuel gas	%	86	88	86
Flared gas	%	13	11	10
Diesel	%	1	1	4
<b>Consumption of HCFC* gas and HFC* gas</b>				
HCFC	Tons	0	0	0
HFC	Tons	0.8	1.4	0.9
<b>Energy consumption</b>				
Total energy consumption	TJ	11,184.9	12,311.3	12,860.4
<b>Use of extracted hydrocarbons</b>				
For sale	%	75	73	72
For internal energy consumption	%	22	24	25
Lost due to safety flare or other	%	3	3	3

<sup>1</sup> Scope 1 and Scope 2 from all offshore assets and logistical support

\* nmVOC = non-methane Volatile Organic Compounds, HCFC = Hydrochlorofluorocarbons, HFC = hydrofluorocarbons

## Care for the Environment

	Unit	2021	2022	2023
<b>Produced water re-injected into the reservoirs or discharged into the sea</b>				
Re-injected produced water	Mm <sup>3</sup>	5.5	6.3	6.2
Discharged produced water	Mm <sup>3</sup>	16.8	17.6	18.6
<b>Oil in produced water discharged into the sea</b>				
Total volume of oil discharge	Tons	91.7	121.6	130.5
<b>Average concentration of oil in produced water discharged into the sea</b>				
Oil concentration	mg/l	5.5	6.9	7.0
<b>Water-based drilling mud and drill cuttings discharged into the sea</b>				
Water-based drilling mud	1,000 m <sup>3</sup>	0	0	6.4
Drill cuttings	1,000 m <sup>3</sup>	0	0	0.8
Number of wells drilled	Number	0	0	0*
<b>Accidental oil spills</b>				
Accidental oil and diesel spills	Tons	0.9	0.8	0.1
Accidental oil and diesel spills	Number	8	6	15
<b>Accidental chemicals spills</b>				
Accidental chemical spills	Tons	2.7	10.5	0.1
Accidental chemical spills	Number	29	32	20
<b>Chemicals discharged into the sea</b>				
Green chemicals	Tons	786	803	3,042
Yellow chemicals	Tons	3,585	4,281	5,021
Red chemicals	Tons	8.5	13.4	15.2
Grand Total	Tons	4,379	5,097	8,079

	Unit	2021	2022	2023
<b>Chemical usage</b>				
Green chemicals	Tons	2,275	4,065	5,175
Yellow chemicals	Tons	6,634	7,640	8,376
Black chemicals	Tons	0	0	0
Red chemicals	Tons	53	70.8	73.5
Grand Total	Tons	8,962	11,776	13,625
<b>Waste management</b>				
Waste total	Tons	2,471	2,985	3,636
Recycled	%	47.0	39.0	42.6
Incinerated <sup>2</sup>	%	51.0	62.0	56.5
Landfilled	%	2.0	0.1	0.9

<sup>2</sup> Incinerated with energy recovery

\* Well completion was achieved in 2024 and was ongoing in 2023

## People's Well-Being

	Unit	2021	2022	2023
<b>Employees</b>				
Workforce onshore	Number	521	486	469
Workforce offshore	Number	357	275	284
<b>Gender</b>				
% of women	%	16	19	18
Among onshore	%	26	28	28
Among offshore	%	3	4	2
<b>Nationalities</b>				
Number of nationalities	Number	51	48	46
<b>Safety</b>				
<b>Exposure hours</b>				
Milions of hours worked	Mh	5.44	7.32	8.32
<b>Occupational injuries</b>				
Fatality	Number	0	0	0
Lost Time Injury	Number	1	4	5
Restricted Workday Case	Number	3	6	9
Medical Treatment Case	Number	1	10	4
First Aid Case (non-recordable injury)	Number	49	108	164
<b>Injury Rates &amp; Targets</b>				
Lost Time Injury Rate (LTIR), number of lost time injuries per million hours worked	Nb/Mh	0.18	0.55	0.60
Total Recordable Injury Rate (TRIR), number of recordable injuries per million hours worked	Nb/Mh	0.92	2.73	2.16

	Unit	2021	2022	2023
<b>Lost Workdays<sup>3</sup></b>				
Number of lost days due to accidents at work	Number	215	375	401
<b>Severity Rate</b>				
Number of days lost due to accidents at work per million hours worked	Number/Mh	39	51	48

## Creating Shared Value

	Unit	2021	2022	2023
Action! program – employee participation	%	10	16	13

## Operational data

	Unit	2021	2022	2023
<b>Production of oil and gas</b>				
Gas	Mt oil eq	1.2	1.1	1.1
Oil	Mt	2.7	2.7	2.5

<sup>3</sup> The number of lost time days is limited to 180 calendar days per injured person



### Editors

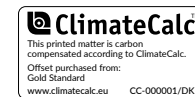
TotalEnergies Communications  
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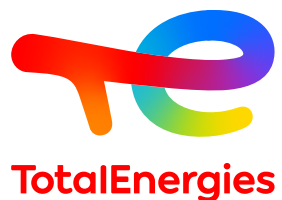
## About TotalEnergies

TotalEnergies is one of the biggest energy companies in the world with more than 100,000 employees worldwide and activities within oil, gas, solar, wind, biofuels, hydrogen, and carbon storage.

TotalEnergies EP Denmark is the leading oil and gas company employing a diverse and international workforce. We are responsible for more than 80% of the oil gas produced and are developing one of the leading carbon storage projects which is expected to store millions of tons of CO<sub>2</sub> in the depleted oil and gas reservoirs in the Danish North Sea. Our operations date back more than half a century and represent an important contribution to Denmark's economy, energy supply and employment. In addition to our oil and gas activities, TotalEnergies is working on establishing new business activities within offshore wind, solar energy, and other renewable energy sources.

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**Read the Sustainability Report 2023 online**



## About DUC

The Danish Underground Consortium (DUC) is a joint venture comprising TotalEnergies (43.2%), BlueNord (36.8%), and Nordsøfonden (20%). DUC is the leading contributor to Danish oil and gas production in the North Sea.

TotalEnergies EP Denmark, as the operator, oversees the exploration and operation of DUC's 14 fields. The onshore base for servicing the fields, pipelines, and platforms is TotalEnergies office in Esbjerg where a diverse team of 800 people work together.



nordsøfonden



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