



2020 Environmental status report

TotalEnergies EP Danmark



TotalEnergies



The new high-tech facilities will be a state-of-the-art production center, contributing 30% less CO₂ and 90% less flaring compared to the old facilities.

Introduction and look ahead

Philippe Groueix
Managing Director TotalEnergies EP Danmark

I am pleased to present the 2020 edition of TotalEnergies EP Danmark's (TEPDK) Environmental Report, which outlines our environmental performance from the past year.

In TEPDK we are committed to supporting Denmark's energy transition by reducing the CO₂ emissions from our operations in the Danish North Sea to the furthest extent possible. We maintain our ambition to operate our offshore installations in the safest, most energy efficient manner while ensuring the lowest possible impact on the environment, including local wildlife and biodiversity.

2020 was an extraordinary year, also for TEPDK. As our teams worked hard to mitigate the impact from the COVID-19 pandemic, they also managed to keep up safe production and to even establish ways to reduce our Greenhouse gas (GHG) emissions, minimize the amount of chemicals used in our operations as well as further decrease the average concentration

of oil in produced water to minimize discharges to sea.

Due to COVID-19 the production in 2020 saw a decline and the year also was represented by the fact that we had no drilling activity. However, the reduced emissions and environmental impact cannot only be attributed to this.

Teams offshore as well as onshore have been working together with a further increased focus on reducing the environmental impact and taking ownership of the work to make our installations more energy efficient. As an example, all sites have been mobilized to find new ways of working, and everyone has been engaged in looking for opportunities to reduce overall emissions and to optimize our energy usage as part of our daily routines. This has, among other things, led to the implementation of a new flaring strategy with the aim of reducing flaring from unplanned incidents.

The Tyra Redevelopment is key to reducing CO₂ intensity going

forward. The new high-tech facilities will be a state-of-the-art production center, contributing 30% less CO₂ and 90% less flaring compared to the old facilities. So, once the new platforms are back in operation, they will contribute positively in the overall TEPDK emissions intensity.

At TEPDK we share the overall ambition for all TotalEnergies sites worldwide of preserving wildlife and biodiversity at and around our onshore and offshore sites. A new study that shows promising results regarding how our offshore facilities contribute to the local marine environment will be published in 2021 by researchers from Aarhus University.

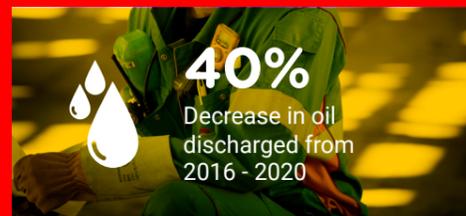
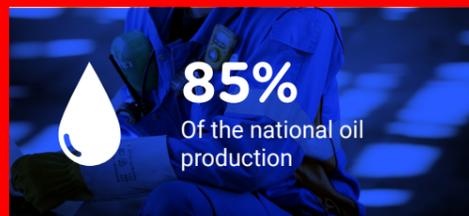
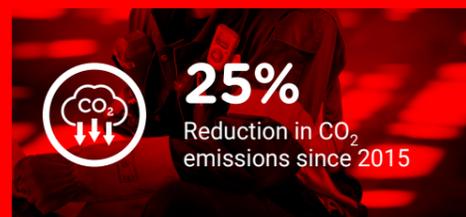
2021 also marks the start of a new Waste Management Plan focusing on sorting the waste from our offshore platforms earlier in the process, making it easier to handle onshore and allowing us to recycle even more of the waste brought onshore.

I hope you enjoy reading our 2020 Environmental Report.

TotalEnergies EP Danmark Strategy

 <p>Be responsible</p> <ul style="list-style-type: none"> ■ Improve health, safety and environmental performance 	 <p>Be sustainable</p> <ul style="list-style-type: none"> ■ Deliver Tyra Redevelopment ■ Accelerate digitalization 	 <p>Be profitable</p> <ul style="list-style-type: none"> ■ Maximize operational efficiency ■ Optimize cost
---	--	--

TotalEnergies EP Danmark at a glance





Glossary

Units of measurement

- **b** barrel
- **B or G** billion
- **Boe** barrel of oil equivalent
- **Btu** British thermal unit
- **CO₂ eq** CO₂ equivalent
- **eq** equivalent
- **Gt** billion tons
- **GW** gigawatt
- **k** thousand
- **M & mill** million
- **Mboe/d** million barrels of oil equivalent per day
- **m³** cubic meters
- **mg/l** milligram per liter
- **MMSCFD** ... million standard cubic feet per day
- **MWh** megawatt-hour
- **t** metric ton
- **toe** ton of oil equivalent
- **DUC** Danish Underground Consortium
- **CCUS** Carbon Capture, Utilization and Storage
- **DEPA** Danish Environmental Protection Agency
- **EU-ETS** EU Emissions Trading Scheme
- **EU SECAs** ... EU Sulfur Emissions Control Areas
- **HCFC** Hydrochlorofluorocarbon
- **HOCNF** Harmonized Offshore Chemical Notification Format
- **HVAC** Heating Ventilation Air-Conditioning
- **IEA** International Energy Agency
- **MARPOL** International Convention for the Prevention of Pollution from Ships
- **NO_x** Nitrogen oxide
- **OSPAR** Oslo and Paris Convention
- **PEMS** Predictive Emissions Monitoring System
- **CEMS** Continuous Emissions Monitoring System
- **PW** Produced water
- **SO_x** Sulphur oxide
- **VOC** Volatile organic compounds

Definitions

- **Bioaccumulation:** The accumulation of a chemical in an organism relative to its level in the ambient medium.
- **Greenhouse gases (GHG):** The six gases named in the Kyoto Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), Sulphur oxide (SO_x), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆), with their respective Global Warming Potential (GWP), as described in the 2007 IPCC report.
- **Operated facilities:** Offshore facilities operated in TotalEnergies Exploration & Production in Denmark.
- **PLONOR:** OSPAR list of substances used and discharged Offshore which are considered to Pose Little or No Risk to the Environment.
- **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.
- **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.
- **VOCs:** Venting gas for safety purposes causes around two thirds of the release of volatile organic compounds (VOCs). In some areas, natural gas is used for maintaining pressure and oxygen-free conditions at production facilities. Some of the gas is emitted directly to the atmosphere through the venting system without being flared. This is called cold venting.

Strategic overview

At TotalEnergies EP Denmark (TEPDK) we have a strong ambition to support the energy transition and help Denmark achieve a dramatic reduction in emissions by 2030.

As we continue our production of oil and gas, we intend to produce it cleanly, sustainably and in the most climate friendly way possible. We are already doing this to the highest of standards, and we continue to raise our standards each year.

As an oil and gas affiliate of TotalEnergies we work diligently to produce with the lowest environmental impact to the climate, oceans and with the waste we create across everything we do. This calls for ongoing daily scrutiny of our methods of working, our data, and the innovative use of new technologies and solutions.

By achieving major reductions in emissions and delivering carbon footprint reduction solutions as Denmark's largest oil and gas producer, we will make an important contribution to the nation's goal of achieving a 70% reduction in CO₂ emissions by 2030 and help to accelerate Denmark's energy transition.

During 2020 we continued to do this with sharper focus. In particular we made progress across three key areas:

- 1.Reducing our CO₂ emissions by making our operations more energy efficient.
- 2.Reducing our methane emissions through smarter ways of working.
- 3.Reducing the use of chemicals when possible and ensuring the selection of 'green' chemicals to achieve zero harmful discharges into the marine environment.

As we look ahead, we will continue our work to be better in all these aspects of our work. You can find out more about our latest carbon footprint reduction initiatives in the Climate, Oceans and Waste Management sections of this report.

2020 four strategic focus areas



Operational & energy efficiency

Implement Gas Flaring Strategy and reduce greenhouse gas emissions intensity.



Biodiversity

Focus on Environmental impact assessments for upcoming projects and complete monitoring of seabed and marine mammals.



Waste management

Ensure waste disposal compliance and implement the new waste management plan.



Chemical management

Transition to greener chemicals and implement the chemical rationalization project.





Climate

At TotalEnergies we are focused on reducing our impact on the world's climate. As a global business, TotalEnergies has an ambition to become carbon net-neutral by 2050 – in every aspect of its work and in all parts of the planet. At TotalEnergies EP Danmark we share this ambition and have mobilized our sites to reduce our emissions by 300-400 kt CO₂ eq by 2030.

To fulfil the ambitious goal of reducing emissions from the DUC production we are focused first and foremost on improving energy efficiency by optimizing the use of fuel, reducing flaring, simplifying our infrastructure and optimizing the supply chain.

Additionally, we are studying different ways to electrify offshore oil and gas operations by bringing renewable power to our offshore facilities. And if a reliable and cost-efficient solution can be found this could help reduce CO₂ emissions from our production facilities.

Similarly, we are investigating the opportunity for carbon capture and storage in depleted fields – essentially, pumping CO₂ into depleted reservoirs.

We already produce oil with one of the world's lowest CO₂ footprints¹, and we are committed to further improving the footprint from our operations on the Danish North Sea. We have made important progress and are aiming to continue to improve steadily.

¹ Global carbon intensity of crude oil production - Stanford University Study



We consistently meet and exceed environmental regulations and the stringent targets we set ourselves.

In the past 15 years, DUC has worked to reduce CO₂ emissions together with the Danish Energy Agency through improved energy efficiency measures and energy management systems. Initiatives that have helped cut CO₂ emissions by 30%.

And since 2016 we have nearly halved our greenhouse gas emissions, reducing them by 46%. The most obvious reason for this is that our Tyra and Harald production sites were fully shut-in in 2020, while Tyra is undergoing redevelopment. And when Tyra comes back into production, the new facilities will be upgraded with advanced technology reducing CO₂ emissions by 30%.

The Tyra redevelopment is the centrepiece of our current work to reduce emissions, and the new high-tech facilities will be a state-of-the-art production centre, contributing 90% less flaring and 40% less methane CH₄ compared to the old facilities. Since Tyra is a huge site, responsible for more than 90% of TEPDK's gas production and over half our oil production, this will have a permanent, dramatic impact on our greenhouse gas emissions. We are building an onshore control room to operate the Tyra installations remotely. This will enable us to use analytics from the digitalized Tyra platform to predict and correct potential issues in a timely way to further reduce our carbon footprint.

CO₂ emissions

CO₂ is released during operations for two main reasons:

1. Running gas turbines and diesel engines to provide the energy needed to run our offshore facilities and their production processes.
2. Safety flaring.

CO₂ emissions



* The amount of CO₂ emissions non-quota in 2017 was corrected after verification of data.

Consumption of hydrochlorofluorocarbons (HCFC gas) and hydrofluorocarbons (HFC gas)



In 2020 around 74% of CO₂ emissions was from gas combustion, 13% from flaring and 8% from diesel combustion and our supply base and 5% from venting.

The most important way of reducing our carbon footprint is currently by improving energy efficiency. Given the large energy consumption our facilities have, there is great scope for simplification. We are tackling this through a series of initiatives. We are modifying facilities to make production more efficient, operating older facilities in leaner and simpler ways, and increasingly adopting new technologies and digitalizing our processes. The resulting data and electronic surveillance of our offshore equipment helps us ensure all equipment is running in the most optimal way. Our operations and maintenance work is increasingly data-driven, and thus more efficient.

We also reduce emissions through optimization of our supply chain such as vessels, helicopters, warehouses and offices.

As a result of all these approaches, in 2020 we consumed less fuel gas and diesel. It is important to highlight that the spread of COVID-19 and the lockdowns impacted the level of activities in the field causing further reductions.

Focus on flaring
Minimizing flaring from our installations is a key priority to reduce CO₂ emissions. Flaring of



Greenhouse gas (GHG) emissions

GHG is the term for the emissions in our atmosphere that prevent heat from escaping into space. This is the Greenhouse Effect.

GHG emissions are measured in kiloton of CO₂ equivalent (kt CO₂ eq) and come from flaring, venting, fuel gas and diesel consumption.



natural gas is a safety measure and cannot be completely eliminated. At an operational level, a stable production process helps to minimize emissions.

In 2020 we introduced a new strategy for minimizing global flaring. Our biggest efforts are focussed on minimizing flaring from unplanned events, as flaring is only to be used in necessary situations, for instance for field start-ups, in an emergency or as a safety measure.

We are modifying existing facilities to make the production process more efficient and thus reduce emissions. Projects like this are underway on Gorm and Dan. With new facilities such as Tyra, the introduction of newer technologies and concepts will help to achieve the goals to further reduce our climate footprint. We expect to reduce Tyra flaring by 90%, when the new Tyra facilities start producing.

In 2020 our biggest sources of flaring were the Gorm (50% of total) and Dan installations. So, our new strategy aims to minimize unstable

operations while putting strict rules in place for dealing with flaring, when it occurs. We immediately work to fix an issue in the shortest time possible, and if necessary shut down production entirely so the flaring stops. We then rigorously investigate to ensure the problem does not occur again.

Our Gorm and Dan facilities are also being modified to make the production process more efficient and reduce flaring. In Gorm we expect to see up to 50% reduction in flaring from 2022.

NO_x, SO_x and nmVOC emissions

Using fossil fuels, whether to run turbines and engines or during flaring, inevitably produces other

emissions in addition to CO₂. The release of all these gases reduced in 2020 as a result of production downtime, and also because of our daily focus on reducing emissions.

NO_x emissions have been continuously decreasing over the past four years and reached their lowest level in 2020. Diesel fuel caused 30% of these emissions, helifuel about 1%, and fuel gas the remainder. COVID-19 restrictions caused a significant reduction in the use of helifuel and diesel because of lower demand for logistics.

SO_x emissions in 2020 were less than half their levels in 2016, mainly because of lower sulphur content in diesel fuels used by our vessels and some offshore equipment. Although the International Maritime

CO₂ emissions 2020 (Production platforms)



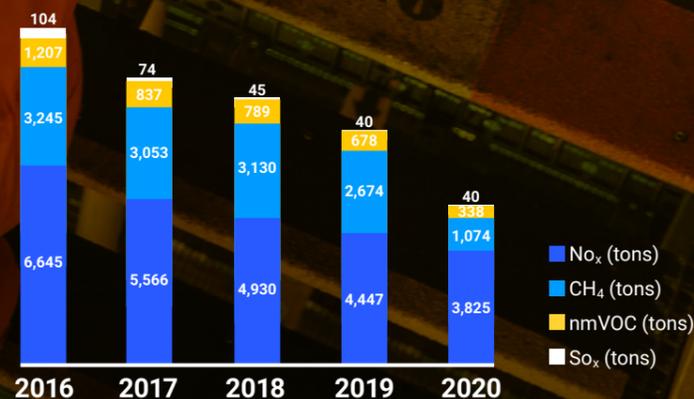


CO₂ emissions per produced hydrocarbons and fluids

■ CO₂ emission/produced fluid (tons/1,000 tons oil equivalent and produced water)
 ■ CO₂ emission/produced hydrocarbons (tons/1,000 tons oil equivalent)



Emissions: NO_x, CH₄, NmVOC and SO_x



Organization's MARPOL Convention for the EU SECAs region (North Sea and Baltic Sea) requires less than 0.1% sulphur in marine fuels, we go much further than that. We buy the highest quality diesel fuel available, with an average sulphur content of 0.04% – less than half the maximum permitted sulphur levels.

Emissions of non-methane VOCs (nmVOC) decreased by 60% in 2020 compared with previous years because of reduced venting after a thorough review of the main sources of emissions to avoid double counting.

In 2020, our total consumption of Hydrofluorocarbon (HFC) gases in gas-based cooling systems such as air conditioning was the same as 2019, at 1.9 tons. We no longer use Hydrochlorofluorocarbon (HCFC) gases for these purposes, which are greenhouse gases that also deplete the stratospheric ozone layer.

Methane CH₄ emissions

TotalEnergies has a clear commitment and ambition to reduce methane emissions from our activities. To limit and control methane emissions, TotalEnergies addresses the various sources of methane – mainly flaring, venting and fugitive emissions – and follows strict design standards to ensure near-zero emissions for its new projects.

In line with our global ambition TEPDK are continuously working to reduce methane emissions, and the redeveloped Tyra operation, a major part of our entire production facilities, will release around 40% less CH₄ than before redevelopment.

At the same time, we are also introducing innovative leak detection and repair (LDAR) processes – something recommended by a new EU strategy² which we are already putting plans in place to comply with. We have started to use new emission measurement technologies such as handheld cameras (forward-looking infrared (FLIR) cameras), and in the future we are looking into the possibility of using drones and satellites.

In 2020 our figures for CH₄ emissions reduced from 3,100 tons in 2019 to 1,100 tons. There were three key reasons for this:

1. Production dropped significantly with production being shut-in at the Tyra Field, meaning less venting.
2. We started to implement our leak detection and repair (LDAR) processes.
3. We carried out a thorough baseline review of our methane emissions as part of a study completed in 2020, and this revealed that we had been double counting some methane emissions (in produced water) – leading to an apparent reduction in emissions, when in fact they had been lower than we thought previously.

Supply chain initiatives

The supply chain has been developed with successful results in reducing emissions, including working with suppliers to deliver enhanced and more efficient services. In TEPDK there is a higher focus on improving measurement and estimation of

² EU strategy to reduce methane emissions

energy consumption and emissions from our supply base, to enable optimization and further identify CO₂ reduction opportunities. Various initiatives are underway whereby suppliers are lowering emissions through smarter and greener operations and logistics. In 2021 this work will result in TotalEnergies taking the first steps towards zero-carbon operations of docked supply vessels in the Port of Esbjerg (powered by green wind power).

Electrification

Switching to using electricity rather than gas and diesel to power our operations would dramatically reduce emissions. The potential reduction is 100 to 400 kt CO₂ eq annually by 2030. This would require significantly modifying our offshore facilities and most importantly would require bringing electricity to them, either by a power cable from land or from a local wind farm. We are currently carefully investigating options from a technical and economic perspective under current regulatory conditions.

Carbon capture and storage

We are exploring the possibilities for implementing carbon capture and storage (CCS) in the Danish North Sea. There is clearly potential for storage of large amounts of CO₂ in our depleted reservoirs and existing infrastructure. We are involved in several CCS projects across the North Sea, where we contribute our expertise and detailed understanding of geological formations. The Northern Lights project in Norway is the most mature, and we are gaining valuable experience that can potentially be applied in the Danish North Sea. However, it's worth noting that implementing CCS in Denmark would require government support to facilitate early phase investments, public-private partnerships and close collaboration.



Oceans

Our goal is to operate with the least impact on the marine environment close to our operations as possible. This is why every year as part of our objectives we aim to reduce the environmental impact from oil and chemicals contained in the discharged water, while also keeping a close eye on our impact on the local biodiversity through official studies and regular monitoring.

The most significant impact our operations have on the North Sea is caused mainly by discharging produced water that contains traces of oil and traces of chemicals. Other effects come from drilling mud and drill cuttings, and accidental oil and chemical spills.

In all these areas our impact decreased in 2020 for two key reasons:

1. Drilling and production activities decreased, mainly due to the entire Tyra field going off stream for reconfiguration.
2. We continued to improve the way we work in a range of areas; using fewer and greener chemicals in production and maintenance, more efficient process for water treatments, and ongoing efforts to optimize and reduce produced water discharges. For our operations we also evaluate the environmental impact from produced water using the Environmental Impact Factor (EIF) tool to identify sites

with the largest improvement opportunities and to support decision making for future development projects.

The presence of oil in produced water discharged from our operations is already far below the regulatory limits. At TEPDK we are taking proactive action to do even more. This year we began a major research programme with the Danish Hydrocarbon Research and Technology Centre (DHRTC) at DTU to investigate and understand our environmental impacts in greater detail. We want to know exactly what the impacts are, what we can change and find ways to move to greener chemicals and technologies.

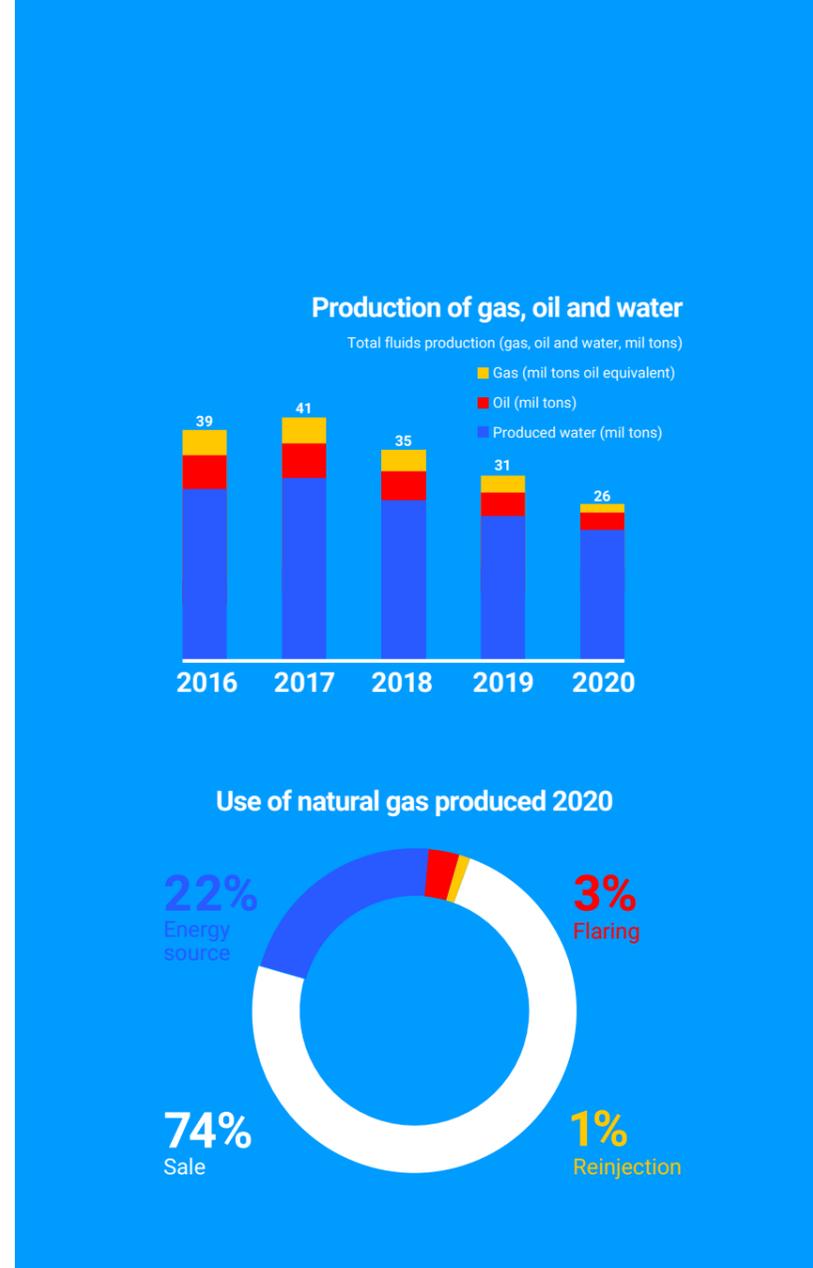
At the same time, we continue our detailed scientific studies into the biodiversity around our facilities, with encouraging results. It seems that our platforms can actively support the growth of marine life, which indicates that our platform structures are having a positive impact on the Danish North Sea.

Biodiversity

In 2020 TotalEnergies made new commitments ([Click to view commitments to biodiversity](#)) that went further than our 2018 pledges – a clear demonstration of our acute awareness of the importance of biodiversity and our impact on it.

We know that putting a platform onto the seabed has an effect on the marine environment around it. And what is the effect exactly? Does it decrease biodiversity or could it increase it? We have taken a scientific approach to answering these questions over recent years and have established a unique and valuable data set.

In 2020 we continued our policy of carrying out a broad range of scientific studies, developed and



carried out by academics and environmental specialists in marine mammal biology, underwater acoustics, metagenomics and ecotoxicology.

Artificial reefs

Studying harbour porpoises has been a big focus for the past eight years, and we have built up a strong body of knowledge based on years of data collection.

Part of this new knowledge is based on a multi-year study, the most comprehensive of its kind conducted in the North Sea, that is part of a larger research program initiated in 2013 in collaboration with marine biologist researchers

from Aarhus University. Studies like these are essential for us to gain more insights into operating with the highest possible responsibility and care for wildlife and biodiversity.

The scientific study focusing on the rig-to-reef potential in the Danish North Sea has given us valuable insights into the whale distribution and feeding patterns around our platforms. We found that whales' occurrence is just as high around our platforms as in protected areas in Danish inner waters. This fits with our frequent sightings of marine mammals including whales.

The peer-reviewed study found that subsea structures create artificial

reefs which have become an important part of the local marine ecosystem and support biodiversity, and we will now look closer at these findings to determine how they can be integrated into our operations and projects.

OSPAR does currently not allow leaving North Sea offshore structures in place upon decommissioning. But the scientific data collected in relation to the rig-to-reef study could provide valuable insights on the potential impact to the regional biodiversity when offshore structures functioning as artificial reefs are removed for decommissioning. This knowledge could potentially be used by academia, the offshore industry and regulatory bodies to discuss the future of platforms in the Danish North Sea.

In 2020 a study, carried out independently by Aarhus University

with support from TotalEnergies EP Denmark, investigated the effect of seismic surveys on harbour porpoises. The study found that porpoises appeared to be temporarily displaced for a few hours, but no general movement away from the seismic survey area could be detected. The results add new knowledge to the understanding of the effect of underwater noise on porpoises as the study found that the effect on the porpoises, and e.g. their foraging efficiency, was lower than previous studies have suggested.

Water column and seabed monitoring

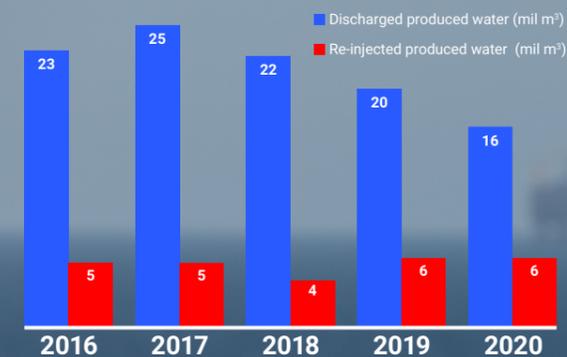
Every three years we undertake a seabed monitoring exercise, and in 2021 the latest one will be carried out. The seabed is affected by drilling, falling objects, etc. Previously we have seen that the sediment recovers quickly after drilling and in 2018 the

environmental status of the seabed was good. We want to verify that this status was maintained or improved.

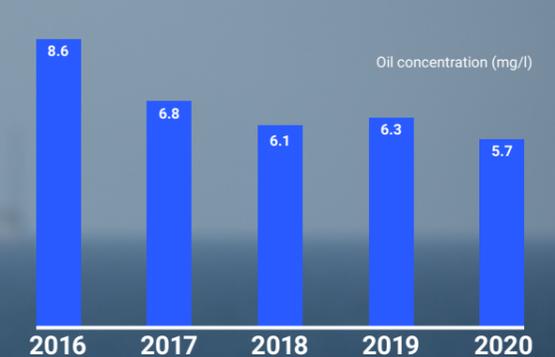
Since 2019 we have similarly initiated water column monitoring around a number of our platforms. The programme is led by experts from DHI A/S and includes a review of scientific literature, laboratory analysis of samples and field experiments. It aims to generate a three-dimensional hydrodynamic model of the water column around the monitored platforms, in order to better understand the impact of produced water discharges.

The study made strong progress in 2020, for example carrying out pilot tests in which caged mussels were placed near platforms and at a reference station 10km away and then studied to see how they were affected. If they are affected by the chemicals in produced water,

Produced water reinjected or discharged into the sea



Average concentration of oil in produced water discharged into the sea





we understand how that goes up the food chain. The study's initial results are very encouraging.

Fulfilling our Biodiversity commitments

Thanks to recent progress in medicine, genomics allows tracking of DNA traces to reveal 'biodiversity' and to 'tell the life of an ecosystem' i.e. any presence of rare or emblematic species, food webs, habitats, spread of an invasive species, population dynamics, biodiversity inventory, etc. In 2017, TotalEnergies funded a research sub-project on environmental genomics and the study of eDNA. TEPDK contributed by applying this technique around offshore platforms in the North Sea to assess how many species are present in the environment and thus how our platforms are affecting biodiversity. This is an exciting and completely new method which we are helping to develop and 2020 saw the publication of the first results from this study.

Produced water discharges

Water exists naturally alongside hydrocarbons in the reservoir and is extracted along with hydrocarbons.



We separate the water from the hydrocarbons and clean it before discharging it to the sea or reinjecting it back into the reservoir.

For a number of years we have been consistently working to reduce the oil we discharge, and since 2016 we have cut the amount by 35%. It is now well below the limits set by the Danish Environmental Protection Agency (DEPA) and the OSPAR Convention. Every day we take samples from the discharged water to find out how much oil is present, and during unstable periods of production we take samples three times a day.

In 2020 the amount of oil that went into the sea in discharged water reached a historic low of 93 tons – far below the permitted maximum of 202 tons. This was the result of the Tyra field shut-in as well as a more efficient treatment of produced water, which removed more oil and brought concentrations down to 5.7 mg/l – far below the OSPAR limit of 30 mg/l.

One key way of reducing oil discharged along with produced water is to put the produced water to use by reinjecting it into the field as part of our production and reservoir management strategy. At present this is only possible in our Gorm and Skjold fields. But due to our work to maintain our equipment, in 2020 around 93% of all produced water from these fields was reinjected, while the overall figure for TEPDK operations was 22% – an improvement on previous years resulting from a more efficient reinjection system at Gorm and Skjold.

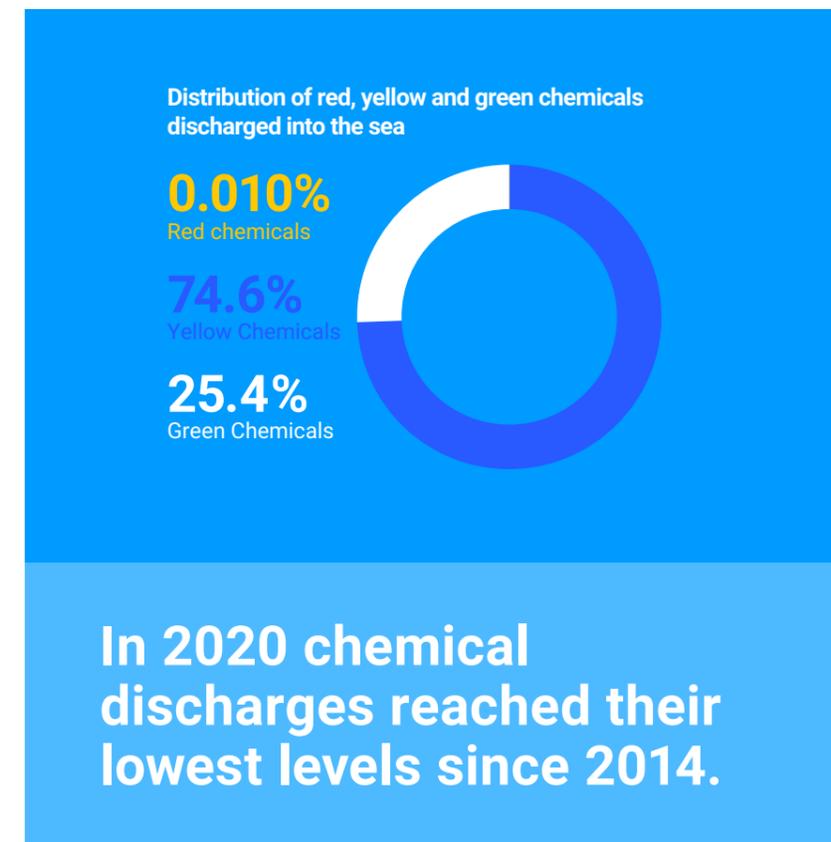
Chemical discharges

Chemicals are used in our production, maintenance and drilling activities for technical, safety and environmental reasons. The use of chemicals and any discharge of them is regulated by the DEPA through a permitting process.

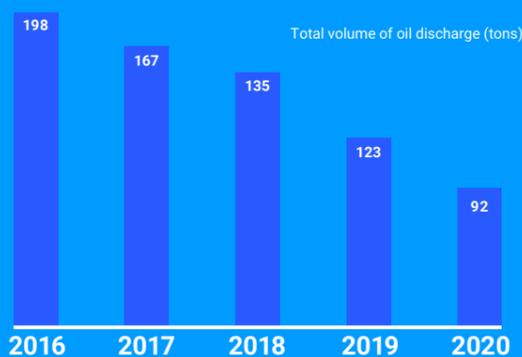
The majority of the chemicals we discharged into the sea are classified as green or yellow, with only 0.01% red.

Some chemicals reduce otherwise potentially dangerous levels of hydrogen sulphide (H2S), others reduce corrosions and hence prevent leaks, some prevent

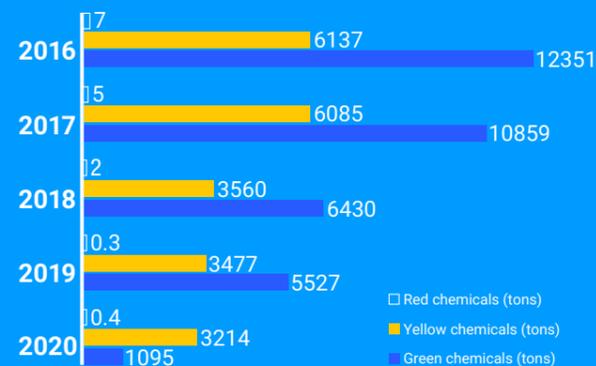
degrade. A certificate, called a Harmonized Offshore Chemical Notification Format (HOCNF), is issued by the chemical vendor and the results are used by our Environmental Advisors to assess the OSPAR chemical classification and any environmental risks associated with their use.



Oil in produced water discharged into the sea



Chemicals discharged into the sea



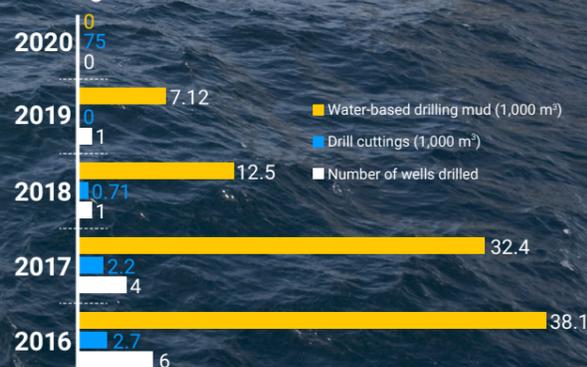
bacteria from building up, and other chemicals make our production more efficient in different ways. Traces of these chemicals are released into the sea along with discharged water and through spills.

Prior to use, TEPDK's production and drilling chemicals are tested by a third-party laboratory to determine whether their bio-accumulated components are toxic or slow to

In 2020 chemical discharges reached their lowest levels since 2014, partly because of the reduction in drilling and production activity and improved selection of chemicals.

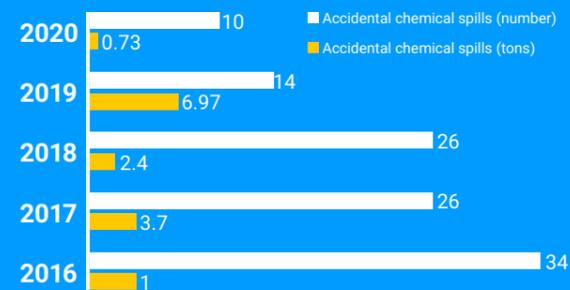


Water-based drilling mud and drill cuttings discharged into the sea



In 2020 the number of spills into the sea were the lowest in the past five years and 18% down on 2019.

Accidental chemical spills



And also because our measurement methods have been refined so we can estimate more accurately the amounts discharged.

New classification

At the beginning of 2020 a new assessment system for surfactant chemicals was introduced by DEPA. The class of chemicals most affected are corrosion inhibitors, which are essential to maintaining the integrity of our production and distribution assets. As a result of the new classifications, some chemicals previously classified as green are now yellow, and some yellow have become red. However, the chemicals themselves remain the same.

We are actively working with our suppliers to find replacements or reducing the use of chemicals that have now changed their classification. We also use our research with DHRTC, which aims to increase our use of green chemicals and reduce our use of the other categories.

Drilling

In 2020, no drilling was carried out, so there was no impact on the sea from this activity. However, once we restart drilling there will be some impact from the processes involved.

We already switched to water-based drilling five years ago, a process that has less impact on the sea than oil-based drilling. During drilling, the resulting mud and drill cuttings (made of rock drilled from the well) are discharged into the sea following strict guidelines. The main environmental issue is that the mud and cuttings may contain traces of oil from the reservoir. We monitor the oil content to ensure it does not

exceed an average 2% – if it does, the mud and cuttings are shipped to shore for treatment and disposal. In case we need to use oil-based drilling for specific reasons, any cuttings and mud are also taken onshore.

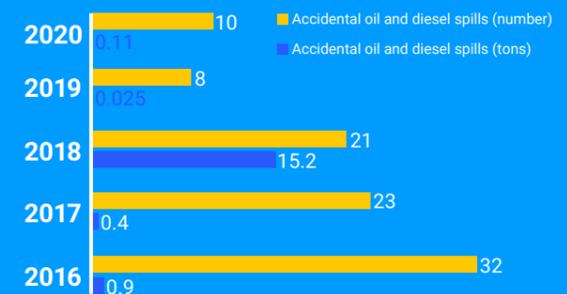
Oil and chemical spills

In 2020 the number of spills into the sea were the lowest in the past five years and 18% down on 2019 – a historic low. This is the direct result of our efforts to increase awareness among our offshore workforce. We have a clear strategy to minimize the impact of spills:

1. Reduce the number of spills taking place.
2. React as quickly as possible to minimize the impact.
3. Investigate to avoid reoccurrences.

The number of chemical spills were 43% lower than 2019 and the volume was 90% lower, from 7 tons to 0.7 tons – a very positive change. However, there were more oil spills in 2020 and the volume increased from 0.025 tons in 2019 to 0.11 tons in 2020. We will continue to increase awareness and investigate every spill to prevent it from reoccurring.

Accidental oil and diesel spills

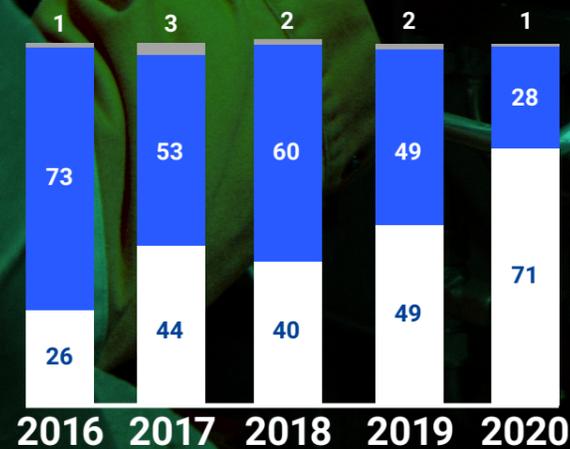


Waste management

At TotalEnergies EP Danmark our job is to produce energy in the cleanest possible way. This means paying close attention to our waste streams and finding better solutions to how we manage those waste streams. In 2020 we continued to make year-on-year progress in waste management in close collaboration with waste contractors, which handle the downstream part of our waste chain. At the same time we created a new Waste Management Plan which supports our journey to further improve our levels of recycling.

Recycled, incinerated or landfill waste

■ Recycled (%)
■ Incinerated (%)
■ Landfilled (%)



Offshore waste

All the waste produced by our facilities in the Danish North Sea is transported onshore, where the vast majority is either recycled or incinerated for energy recovery. Less than 1% is sent to landfill. 2020 saw a historic high of 71% recycled waste from the total waste generated by the offshore platforms thanks to the sorting efforts made onshore.

Waste Management Plan (WMP)

In 2020 our offshore and onshore teams defined a Waste Management Plan that focuses on increasing our waste segregation at all sites. We will be moving to a system in which waste is sorted into a number of categories as it is discarded, making it possible to recycle even more and making onshore processing simpler and more efficient.

The plan will be put into full action in 2021, when sorting bins will be sent to each site along with a site-specific plan, and all employees

involved with waste sorting will receive training. We will also monitor progress carefully.

We spent time collaborating with our waste management contractors to ensure we work as seamlessly as possible with them and to optimize every part of the waste management process.

NORM

All oil and gas producers have to deal with Naturally Occurring Radioactive Materials (NORM), fortunately the small amounts of radioactive substances in the subsoil of the North Sea have low levels of radioactivity. Nevertheless, we handle and store NORM with great care to make absolutely sure it poses no risk to our employees, contractors, the general public or the surrounding environment.

Only trained staff, certified according to Danish legislation, are allowed to work where there is exposure to NORM, and they always follow specific procedures for proper handling to guarantee

their health and safety and also to protect the environment. We regularly assess these procedures and the personal protective equipment used, and the Radiation Protection Agency (SIS) also performs audits in our installations.

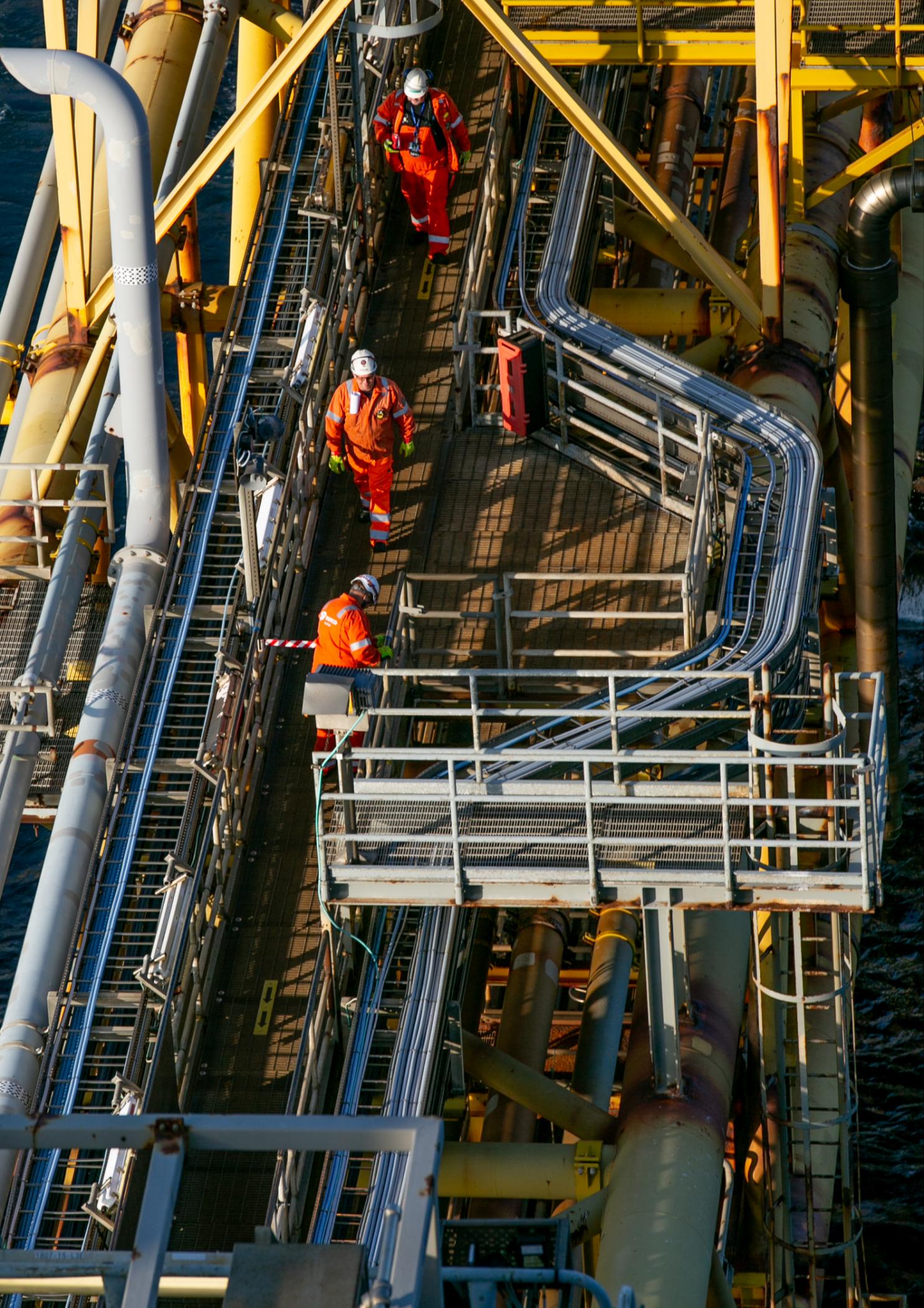
Onshore NORM is handled by specialized service companies that treat and pack NORM in several layers consisting of liners and multiple drums to ensure the waste cannot leak.

The NORM waste is stored in an approved, inspected and fenced off area with proper signage. Radiation is regularly monitored to ensure that levels around the perimeter of the NORM yard are below the regulatory limits.

Our NORM storage yard is fully compliant with all rules and regulations from the Danish authorities, and we continue to maintain and upgrade it in order to ensure safe storage of our NORM waste until a permanent solution for NORM is found.

At the moment, Denmark does not have a permanent disposal solution for NORM, but we are currently in discussions with the Danish authorities to find a safe future solution. If and when a technical solution is found it would greatly benefit the entire Danish oil and gas industry.

2020 saw a historic high of 71% recycled waste



Conclusion

Our sincere ambition is to be a vital part of the solution to the world's environmental and climate challenges. We work hard every day to succeed in this.

TotalEnergies environmental publications

TotalEnergies provides a range of communication platforms and publications outlining TotalEnergies corporate social responsibility (CSR). In addition to the materials below, you can find additional information on our Sustainable Performance website, www.sustainable-performance.total.com. All other publications along with the latest news and reports can be found at www.total.com.



2020 Climate report

Integrating Climate into our strategy, discover our four Climate-Oriented strategic focuses: natural gas, stepping up our low-carbon electricity activities, promoting sustainable biofuels and investing in carbon storage.

<https://totalenergies.com/sites/g/files/nytnzq121/files/documents/2020-10/total-climate-report-2020.pdf>

TotalEnergies and Biodiversity

Through the act4nature initiative, TotalEnergies has reaffirmed and broadened its commitment to biodiversity. We adhere to the 10 undertakings, and have added six specific commitments of our own.

https://totalenergies.com/sites/g/files/nytnzq121/files/documents/2021-05/VO_Total_Biodiversite%CC%81_20210506-EXE.pdf

Design and disclaimer:

This report, from which no legal consequences may be drawn, is for information purposes only. The entities in which TotalEnergies SE directly or indirectly owns investments are separate legal entities. TotalEnergies SE has no liability for their acts or omissions. In this document, the terms "TotalEnergies", "TotalEnergies "Company" and "Company" are sometimes used for convenience. Likewise, the words "we", "us" and "our" may also be used to refer to subsidiaries in general or to those who work for them.

It cannot be inferred from the use of these expressions that TotalEnergies SE or any of its affiliates is involved in the business or management of any other TotalEnergies Group company. This document refer to a carbon intensity indicator for TotalEnergies energy sales that measures the weighted average greenhouse gas emissions of energy products sold by TotalEnergies, from their production in TotalEnergies facilities to their end use by TotalEnergies customers. This indicator covers, besides direct GHG emissions of TotalEnergies (scope 1), indirect GHG emissions (scopes 2 and 3) that TotalEnergies does not control (for the definitions of scopes 1, 2 and 3, refer to TotalEnergies Registration Document).

This report may contain forward-looking information and statements that are based on a number of economic data and assumptions made in a given economic, competitive and regulatory environment. They may prove to be inaccurate in the future and are subject to a number of risk factors. Neither TotalEnergies SE nor any of its subsidiaries assumes any obligation to update publicly any forward-looking information or statement, objectives or trends contained in this document whether as a result of new information, future events or otherwise. Additional information concerning factors, risks and uncertainties that may affect TotalEnergies financial results or activities is provided in the most recent Registration Document, the French-language version of which is filed with the French securities regulator Autorité des Marchés Financiers (AMF), and in Form 20-F filed with the United States Securities and Exchange Commission (SEC).

Sustainable performance

Since 2016, TotalEnergies has provided transparent information on our CSR strategy and challenges in a dedicated website. The website, regularly updated, introduces the company's policies, commitments and performance on all sustainability issues relevant to TotalEnergies, particularly safety, climate, environmental stewardship, business ethics, human rights and community engagement, environmental, social and governance (ESG) reporting standards and indexes.

<https://sustainable-performance.totalenergies.com/en/>

