

# Sustainability Report 2021

Petrogas E&P Netherlands B.V.







#### ABOUT THIS REPORT

The 2021 release of the Petrogas E&P Netherlands B.V. (PEPN) Sustainability Report provides an update of the Company's journey in the Environmental Social Governance world building on learnings of the 2020 Sustainability Report.

This document has been drafted following the IPIECA Sustainability Reporting Guidance for the Oil and Gas Industry [1], while the materialities have been defined around the GRI 11: Oil and Gas Sector standard [2]. The document has been reviewed and approved by the PEPN Societal and Ethics Committee and the Board of Directors.



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I am really pleased to see how the Petrogas European operations continue to translate the Petrogas E&P Core Values into creating a more sustainable business, focusing on emissions reduction initiatives, courageous investments, technical ingenuity and a solid level of integrity and transparency. This new Sustainability Report from Petrogas E&P Netherlands shows how Petrogas E&P is strongly committed to lead on ESG capabilities within this subsidiary and to transfer the acquired knowledge to the other operated and non-operated units across the regions we operate.

**Usama Al Barwani**  
Chief Executive Officer  
Petrogas E&P Group

Everyone involved in the Petrogas E&P Dutch operations has shown a very high level of resilience in these very turbulent times, where we have been confronted with very volatile macros in an ever challenging social, political and financial situation. Petrogas E&P has been operating in the Netherlands since the end of 2014 and is committed to continue to invest to provide for the energy needs of the local community. By doing this, we will always be looking for opportunities to reduce our carbon footprint and to become a more sustainable energy sources' provider. I am proud to showcase this Sustainability 2021 report as a clear and transparent effort of how Petrogas E&P contributes to deliver sustainable gas in Europe.

**Kingsuk Sen**  
Chief Commercial Officer and Vice President Europe  
Petrogas E&P Group





## OUR SUSTAINABILITY

In 2021, we reached a very important milestone for Petrogas E&P Netherlands B.V. (PEPN), completing our first Sustainability Report, which was shared with our internal and external stakeholders. Building on the feedback we have received from our stakeholders, we have taken steps this year to further consolidate the ESG aspects within our business with improved definition of our strategic goals to support the energy transition.

## OUR CONTEXT

In 2021, there has been another acceleration in society with respect to energy transition and transparency; the outcome of the Glasgow Climate Pact following the COP26 in the UK, the “Coalitieakkoord” established by the new Dutch Government and the proposal implementation of the European Union Corporate Sustainability Reporting Directive (CSRD) all made a mark to the public opinion. Our context is rapidly changing and we need to ensure that we are on top of our game and anticipate challenges and plan ahead.

## OUR OPERATIONS

In 2021, after almost 40 years from the first oil extracted and produced from the Helm Platform, we took a historical decision to shutdown all the oil producing assets in the P/Q Blocks of the Dutch Continental Shelf. This will accelerate our plans to decommission all of our oil assets, demonstrating our commitment to remove the platforms. During 2021, we agreed a multi-year contract with Heerema Marine Contractors to support us in the decommissioning, removal and disposal of those platforms. It is anticipated that we can recycle over 98% of the material, following the dismantling of the platforms. We are also investigating the possibility to upcycle our pipelines for re-use.

## OUR RESILIENCE

2021 has also seen a rise in the price of gas, our primary product, and stable high oil price. By having committed in 2020 to drill three wells in the A/B Block, this gave us the opportunity to position ourselves very competitively in the gas market and provide the local economy with Dutch Gas; the importance of which has been amplified by the issue of importing gas from Russia emerged after the initiation of war in Ukraine in early 2022. This re-enforced the trust in ourselves, our capacity to overcome the “triple storm” of 2020 and be ready to take on any new challenge.

## OUR COMMITMENT

We are convinced that we can make a positive impact on Climate change; the European Union has recently nominated natural gas as a sustainable fuel to support the energy transition. We are supportive of this initiative, and we are still investing in “natural gas” and looking for opportunities to increase efficiency and we have continued to reduce our Scope 1 emissions associated with our production.

Sincerely,

**Nick Dancer**

*PEPN General Manager*





# PEPN Operated Assets and Production Overview



**A12 CENTRAL  
PROCESSING PLATFORM**  
Gas Fields  
Manned Facility  
Max POB 22



PRODUCING WELLS: **9**  
GROSS PRODUCTION: **6,785 BOED**

16" 10 km pipeline to NOGAT Extension

16" 26 km pipeline

12" 32 km pipeline

**A18A**  
Gas Fields  
Unmanned Facility  
Max POB 8



PRODUCING WELLS: **5**  
GROSS PRODUCTION: **8,438 BOED**

PRODUCING WELLS: **4**  
GROSS PRODUCTION: **4,003 BOED**

**B13A**  
Gas Fields  
Unmanned Facility  
Max POB: 8





# PEPN Operated Assets and Production Overview



PRODUCING WELLS: 1  
GROSS PRODUCTION: **INCLUDED  
WITHIN HELDER**

PRODUCING WELLS: 8  
INJECTION WELLS: 1  
GROSS PRODUCTION: **676 BOED**

**P9 HORIZON**  
Oil Fields  
Unmanned Facility  
Max POB: 16



PRODUCING WELLS: 3  
GROSS PRODUCTION: **261 BOED**

**Q1 HELDER**  
Oil Fields  
Manned Facility  
Max POB: 34



**Q1 HAVEN**  
Oil Fields  
Unmanned Facility  
Max POB: 4

**Q1 HOORN**  
Under Decommissioning  
Unmanned Facility  
Max POB: 25  
Fuel gas transfer from Q4C to Helder



**Q1 HELM**  
Lighthouse Mode  
Unmanned Facility  
Up and over  
Transfer



20" ~58 km pipeline to Ijmuiden  
20" ~21 km onshore pipeline to EVOS Amsterdam



# ESG, THE JOURNEY

With the publication of the first PEPN Sustainability Report 2020, in 2021 we were able to accelerate our journey into the ESG world, adding increasing focus and attention to the

matter. ESG is now part of our daily discourse, no project or activity is discussed without taking into consideration what can we do to improve our impact to society.

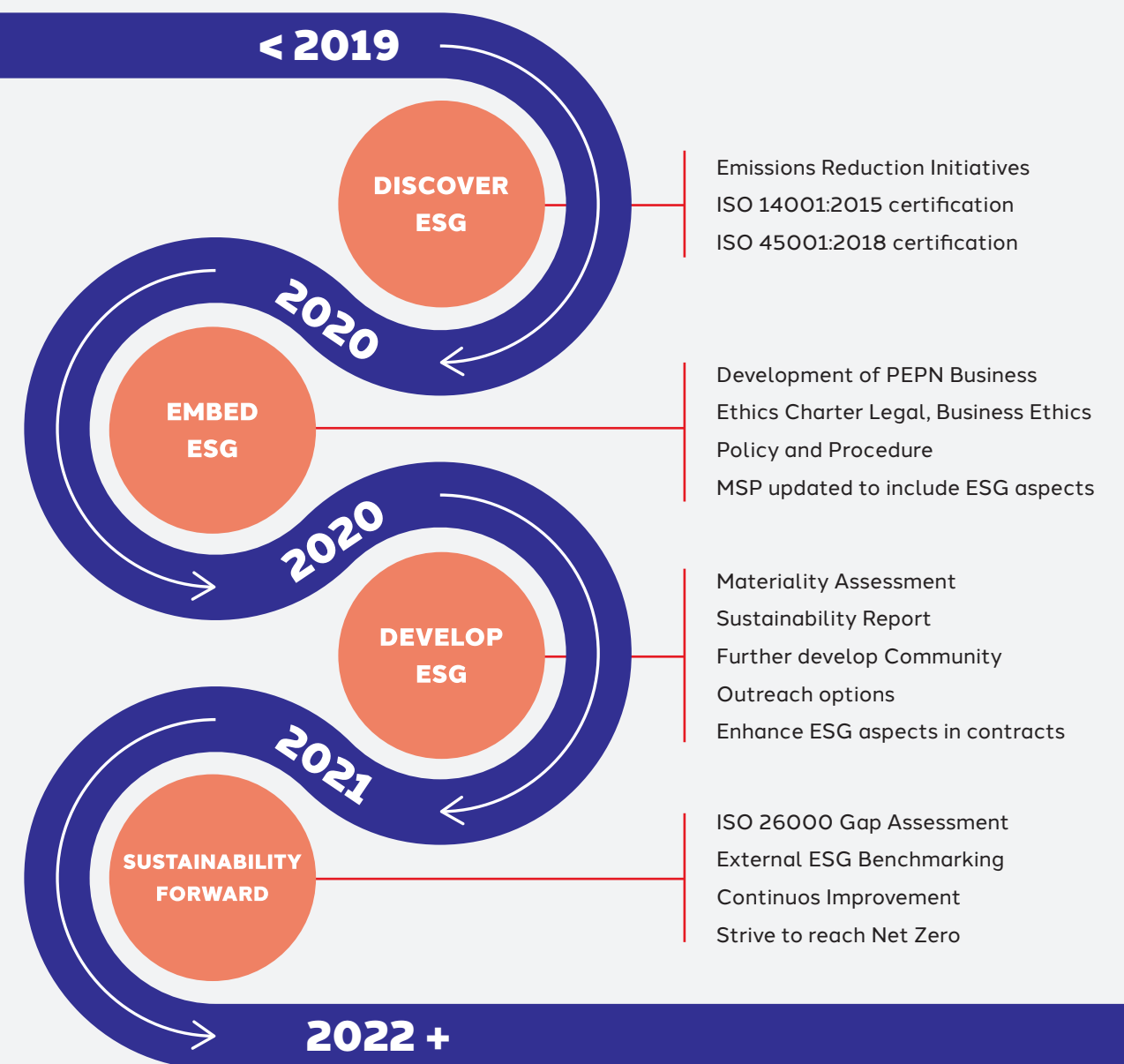


Figure 1 - ESG Roadmap



Vision	Differentiation
Being an independent E&P Company	Diverse portfolio focused on an energy transition proof portfolio (focused on gas)
Being Resilient / Focused on Safety	Ensure late life assets will be safely decommissioned minimizing the impact on the environment and if possible utilized for the energy transition
Coping with the changing need for energy and its mix	Disciplined and strategy focused capital allocation
Being environment and socially responsible	












Enablers	Business Model
Skilled motivated diverse workforce	<b>Explore</b> Add high grade value opportunities to the portfolio
Gas focused portfolio	<b>Develop</b> Develop gas fields around existing infrastructure
Partner of choice	<b>Produce</b> Produce in a safe, environmentally conscious manner
Smart use of technologies to produce energy safely whilst minimising emissions	<b>Decommission</b> Decommission wells and infrastructure in a safe and cost effective way

Strategy
<b>Maximise</b> Focus on maximising offshore domestic gas production as an enabler for the Energy Transition
<b>Reduce</b> Reduce GHG emissions by adopting more efficient workflows and technologies
<b>Develop</b> Develop and retain talent whilst continuing to attract diverse and innovative people
<b>Manage</b> Manage and enhance the value of late-life assets in a sustainable way
<b>Decommission</b> Decommission and upcycle key infrastructure to enable energy transition options












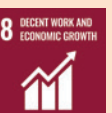
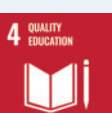






1.1 ESG STRATEGY AND UN SDG

Materialities	Current Status	Looking forward	UN Sustainable Development Goals
Governance and Business Ethics			
Compliance	<ul style="list-style-type: none"><li>• ISO 14001:2015 and ISO 45001:2018 certification</li><li>• Gap assessment against ISO 26000</li><li>• Annual Financial Audit</li><li>• Tax Audits</li><li>• Partners Audit</li></ul>	<ul style="list-style-type: none"><li>• Maintain ISO certification</li><li>• Complete CDP Emissions Disclosure Questionnaire</li><li>• Complete ISO 26000 SCR Ladder verification audit</li></ul>	
Transparency	<ul style="list-style-type: none"><li>• Participate in NL EITI and payment to government reporting</li><li>• Participate in Annual country-by-country reporting</li><li>• Annual Master File and Local File updates</li><li>• UBO / KYC / MDR (DAC6)</li><li>• Decommissioning Security Agreements</li><li>• Decommissioning Security Master Agreement with EBN (State Participation Company) (annual process)</li></ul>	<ul style="list-style-type: none"><li>• CSRD implementation</li><li>• Business Assurance process</li></ul>	  
Anti-corruption / bribery / money-laundering	<ul style="list-style-type: none"><li>• Developed PEPN Business Ethics Charter</li><li>• New Standard Service Contracts Terms and Conditions including ESG requirements implemented</li><li>• Awareness Training developed and rolled-out</li></ul>	<ul style="list-style-type: none"><li>• Continue with improving personnel training and competence on transparency</li><li>• Deliver Human Rights on O&amp;G Business Training</li></ul>	 
Climate Change and Energy			
Air Emissions	<ul style="list-style-type: none"><li>• Continuous monitoring of air emissions</li><li>• Electrification of A/B Block project started</li><li>• Helm Platform in Lighthouse mode powered only by Solar Panels</li></ul>	<ul style="list-style-type: none"><li>• Reduced Scope 1 emissions 60% by 2030 (relative to 1990) with interim goal of 50% in 2025</li><li>• Complete study of Scope 2 and 3 emissions and define reduction strategy</li><li>• Attention to substances of high concern</li><li>• Maximise use of renewables to support P/Q Block facilities in Lighthouse mode</li></ul>	
Energy Efficiency	<ul style="list-style-type: none"><li>• Energy Directive</li><li>• ETS Scheme</li></ul>	<ul style="list-style-type: none"><li>• Application of new energy directive requirements</li><li>• Re-wheeling of the A12-CPP gas compressors</li></ul>	 
Technology	<ul style="list-style-type: none"><li>• Natural Gas production</li><li>• Initial phase of A12-CPP electrification project completed</li></ul>	<ul style="list-style-type: none"><li>• Maximise gas production as source of local gas with lower CO<sub>2</sub> footprint</li><li>• Continue to explore alternative technologies to reduce footprint</li><li>• Implement Carbon Transport and Storage</li></ul>	 



Materialities	Current Status	Looking forward	UN Sustainable Development Goals
<b>Environment</b>			
<b>Water Emissions</b>	<ul style="list-style-type: none"> <li>Monitoring of discharged water</li> </ul>	<ul style="list-style-type: none"> <li>Significant decrease in discharged water</li> </ul>	  
<b>Material Management</b>	<ul style="list-style-type: none"> <li>Separation and minimization of waste</li> <li>Introduction of waste separation at office</li> </ul>	<ul style="list-style-type: none"> <li>Improve waste separation streams</li> <li>Upcycling / recycling of material / inventory / goods</li> </ul>	  
<b>Bio-diversity</b>	<ul style="list-style-type: none"> <li>Studies on underwater noise effect on porpoises</li> <li>Studies on artificial reefs</li> </ul>	<ul style="list-style-type: none"> <li>Maintain Halfweg Gravity Base Structure (GBS) as areas of scientific interest for studying flora and fauna in artificial reefs</li> <li>Perform additional study on noise effects on mammals (cetaceans)</li> <li>Use of lower impact geophysical exploration technique (e.g. CSEM)</li> </ul>	 
<b>Decommissioning</b>	<ul style="list-style-type: none"> <li>Decommissioning strategy to decrease PEPN footprint</li> <li>Helm in Lighthouse mode at the end of 2021</li> <li>Horizon P9 A9 well P&amp;A executed</li> <li>Phase 1 of Helder Wells P&amp;A executed</li> </ul>	<ul style="list-style-type: none"> <li>Bring Haven, Helder, Horizon and Hoorn in lighthouse mode</li> <li>Plug and Abandon (P&amp;A) Hoon and Haven wells to prepare platform for removal</li> <li>Complete Helder P&amp;A with PEPN work basket</li> <li>Maximise material recycling / upcycling</li> </ul>	
<b>Safety, Health and Security</b>			
<b>Health and Safety Protection</b>	<ul style="list-style-type: none"> <li>Enacting of working from home policies and practices</li> <li>Start implementation of Safety II / Resilience practices</li> <li>Health and Wellbeing Program supported by the Company Doctor</li> </ul>	<ul style="list-style-type: none"> <li>Further implementation of Psychosocial Aspects (PSA) improvement plans</li> <li>Implementation of Psychological Safety aspects into Safety II</li> </ul>	 
<b>Process Safety</b>	<ul style="list-style-type: none"> <li>Operations compliant with the Offshore Safety Directive (OSD) Requirements</li> <li>Realignment of Process Safety KPI to API standard</li> <li>Asset integrity assessments and reviews</li> </ul>	<ul style="list-style-type: none"> <li>Improve Incident Investigation Process focus on Process Safety</li> </ul>	 
<b>Social</b>			
<b>Labour Practices</b>	<ul style="list-style-type: none"> <li>Working From Home Survey</li> <li>Quarterly Work Council meetings</li> <li>Quarterly Societal Ethics Committee meetings</li> </ul>	<ul style="list-style-type: none"> <li>Increase gender diversity and eliminate barriers to access</li> <li>Strengthen the Trusted Persons process</li> </ul>	 
<b>Community Outreach</b>	<ul style="list-style-type: none"> <li>“Connect” Activities</li> <li>Local charity initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Increase local footprint of Community Outreach</li> </ul>	 



## 1.2 PEPN ETHICAL PRINCIPLES

Based on the Petrogas E&P LLC Vision, Mission and Core Values, we developed a set of Ethical Principles, which are going to be used as a driver for a more sustainable business in the Netherlands and Europe, at large. The PEPN Ethical Principles are incorporated into our Management System, which guide us on our daily activities to produce energy solutions to support the transition to a more sustainable life in the country we operate.



### ACCOUNTABILITY

To achieve the long and short-term goals of our Company, it is important that all people within the Company work together and share accountability. No matter the level of seniority, we all are equally accountable to complete our work to contribute to the success of our Company.

In Petrogas, we hold ourselves and our teams responsible to complete the tasks we are assigned or required for in our jobs. By being accountable, we make our business safer, more productive and efficient.



### INTEGRITY

We care a lot about honesty and integrity, because this not only creates value, it builds trust and confidence internally and with our stakeholders and business partners. Being honest means being fair, truthful and straightforward. Integrity is about possessing and sticking to high ethical principles.

In Petrogas, we expect from each other to act ethically and legally, with honesty, integrity and respect.



### PASSION

When passion is strong, it is possible to overcome barriers, achieve big things and have a big impact in the world. At Petrogas,

we experience that having a passion for our work is energising. We are doing what we are looking forward to every day. That makes us happy and motivates our colleagues.

We strive to radiate our passion also towards our business relations.



### THE WILL TO SUCCEED

In Petrogas, we stimulate each other to provide solutions to progress further without compromising on our integrity. We encourage and reward proposals of new ideas or procedures that either add value, reduce complexity or improve health, safety or our environmental footprint.

We have the drive, determination and commitment to succeed, but not at any price; we will stop an activity, if this is better for the safety of our workers, the community and the environment.



### OPENNESS AND DIVERSITY

In Petrogas, we are open and inclusive. We value diversity amongst our workforce and the contractors we employ. We respect all opinions and beliefs without consideration of the person and his or her role.



### GIVING BACK

At Petrogas, we care about our each other and the communities we are part of. We encourage each other to support local communities, to volunteer, and we provide work experience to young people.



### WE LOOK AFTER EACH OTHER AND THE WORLD AROUND US

At Petrogas, we support and we take care of each other: there are short and informal communication channels (open-door policy), which reduce barriers for speaking out.

We do not tolerate harassment and / or questionable conduct. As a Company, we have an appropriate 'Grievance Process' to ensure a safe workplace to all, no matter the position.

In dealing with contractors and third-parties, we seek partners who respect human rights and avoid child or modern-day slave labour. We restrict our activities to those who are not under international sanctions or trade controls.

A 'Whistle-blower Process' is in place to help anyone report on activities that are deemed to be illegal, unethical or dishonest. When we undertake our activities, we aim to minimise the impact to the environment, taking due care of stakeholders and applying appropriate technical solutions.

## 1.3 MATERIALITY ASSESSMENT

### 1.3.1 Context of the Organisation

In 2021, the Context of Organisation did not change significantly, however, the series of COVID-19 pandemic waves and the ramp up of the commodities prices, with the associated impact to local and global communities and the nomination of gas as transition fuel (EU Green New Deal) [7] did have an effect on local stakeholders positioning on upstream activities. At the moment of writing this report, the long-term effects of the war in Ukraine are still unclear, but the energy supply issue has been proven to be a complex affair, requiring re-prioritisation of international and national policies.

After the unsuccessful drilling of the Horizon West P9 well, we decided that we would finally stop oil production in mid-2022 we and started accelerating the decommissioning activities of the P/Q Assets. At the end of 2021, PEPN is operating one (1) manned gas platform in the A/B Blocks of the Dutch

Continental Shelf, and one (1) manned oil platform in the Q1 Block; PEPN also operates four (4) Normally Unattended Installations (NUI), which are connected via pipelines to the manned installations. Two (2) other platforms are not in production, but are used for hydrocarbon transportation; one (1) facility was transferred into "Lighthouse Mode" in December 2021. The gas from the A/B fields is compressed and transported via a dedicated trunk to the NOGAT extension after which it enters the NOGAT system. The oil is transported via our owned offshore and onshore pipelines to Evos Amsterdam East (formerly known as Oil Tanking Amsterdam). PEPN's production has a very limited footprint within any onshore community. PEPN offshore operations are supported by onshore personnel located in Rijswijk. Around April 2021, we completed the transfer of our Supply Base operations to a new and more energy efficient building at BUKO in Beverwijk.

The business environment of PEPN continues to be stable and mature. There has been a long history of oil and gas exploration and production in the Netherlands (PEPN celebrated 50 years of these operations in 2017), which has developed and maintained local expertise, in a stable legislative environment.

Generally, PEPN develops and operates gas fields in consortia with other oil and gas companies and EBN, the state-owned Oil and Gas Company, under an Agreement of Cooperation (AOC). PEPN, as the Operator, takes care for safe and reliable development, operation and ultimately decommissioning of our facilities, whilst the partner companies provide governance to their financial investment in our operations through a regular series of Joint Venture committee meetings (Technical Committee and Operations Committee).

<sup>1</sup> Lighthouse mode refer to a platform which is ready for removal and left with marine navigational aids

<sup>2</sup> NOGEPA formally changed name into Element NL in April 2022.



PEPN is part of the Netherlands Oil and Gas Exploration and Production Association (NOGEP), which supports common HSE and operational standards across the industry and NexStep, which is providing support for intelligent re-use of the existing infrastructure.

1.3.2 Materiality Assessment

During 2021, the Materiality Assessment has been

reviewed and more details have been added to map out the status of the materialities with respect to 2020 to improve its transparency; we added a new materialities on Mental Health, Substances of High Concern (SHC) and Economic Impacts. These better define the effect to the personnel’s health after COVID-19, the exposure to hazardous substances (e.g. Chrome VI, PFAS, Benzene) and the impact to the local economy.



Materiality	ASSESSMENT 2021			
	A/B	P/Q	Office	Supply Base
Air Emissions	😊	😊		
Energy Efficiency	😊	😬	😊	😊
ETS / Carbon Taxes	😊			
Substances of High Concern	😊	😊		
Process Safety	😊	😞		
Occupational Safety	😊	😊	😊	😊
Mental Health	😊	😊	😊	😊
Bio-diversity	😊			
Waste	😊	😊	😊	😊
Produces Water	😊	😊		
Diversity / Inclusion			😊	
Suppliers			😊	
Decommissioning		😊		
Commodities Prices			😊	
Water Use			😊	😊
Human Rights			😊	
Modern-day Slavery			😊	
Child Labour			😊	
NGO			😊	
Social Media / Media			😊	
Transparency			😊	
Anti-money Laundering			😊	
Anti-bribery / Anti-corruption			😊	
Compliance (with Legislation)			😊	
Conflict of Interest			😊	
Trade and Sanction			😊	
Cyber-security	😊	😊	😬	
Local Communities			😊	😊
Land Use			😊	😬
Freedom of Association			😊	
(Conflict and) Security			😊	
Economic Impacts			😊	

😊 improved performance   😬 slight improved performance   😊 stable performance   😞 slight decrease in performance   😞 decrease in performance



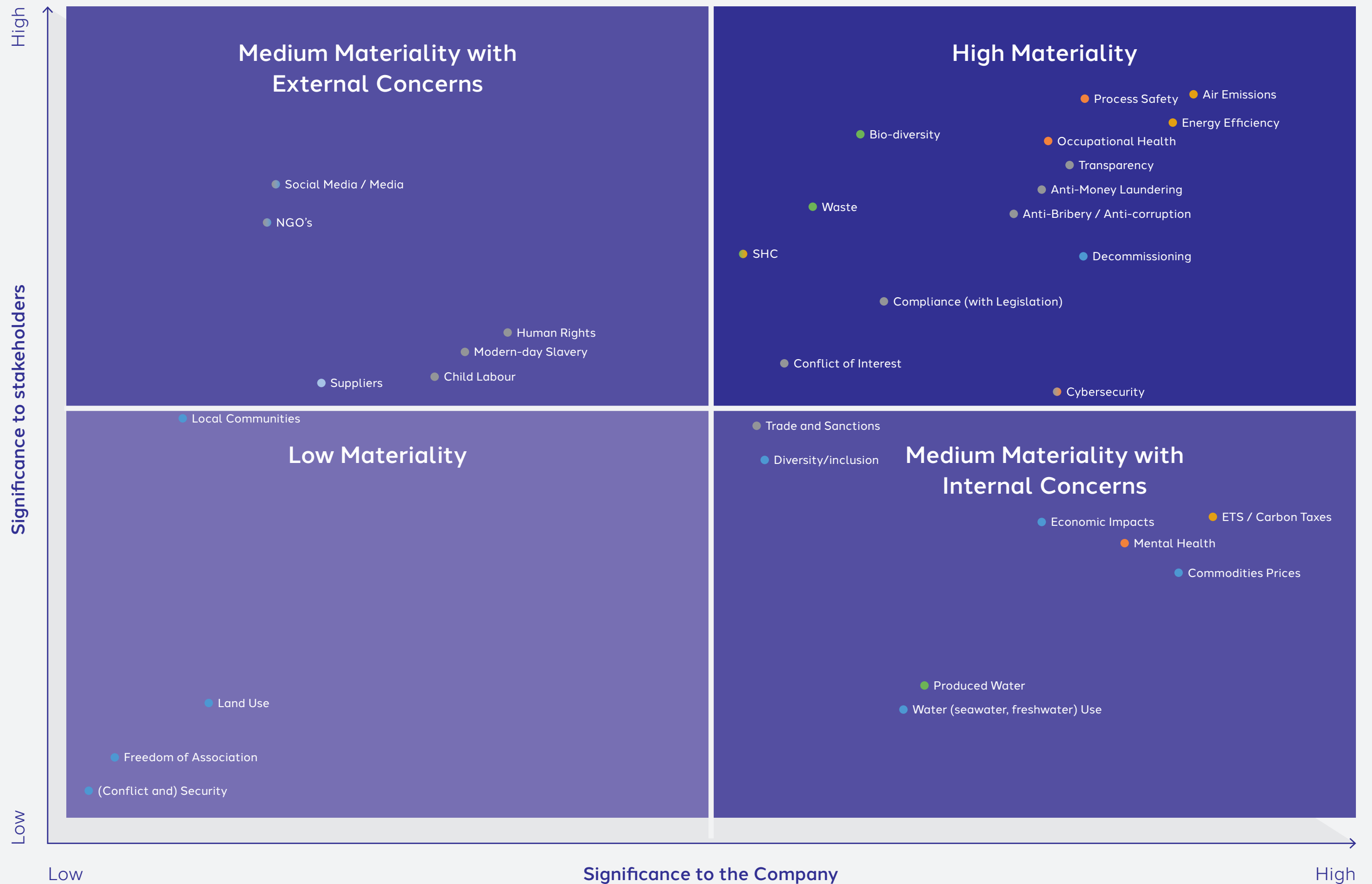


Figure 2 – PEPN Materiality Matrix



# PERFORMANCE, AT GLANCE



Looking at the performance of PEPN during 2021, we saw significant improvements of our financial indicators due to the increase of commodity prices and reliable production, enhanced due to the investment in drilling new production wells on the A/B fields over the year end of 2020. During 2021, we continued to deal with the waves of COVID-19 pandemic, managing it without having significant impact to the health of personnel and the business continuity.

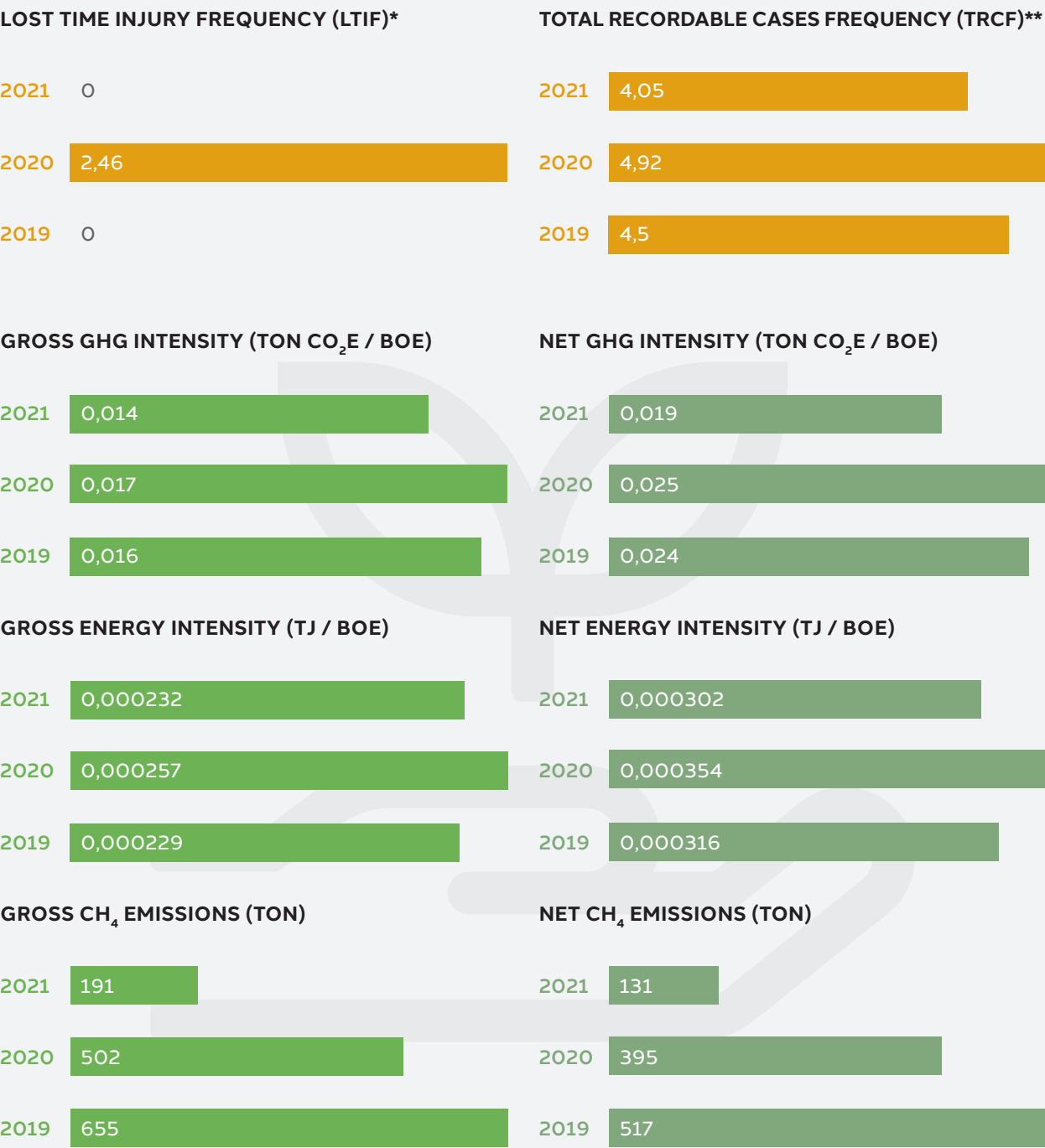
In line with the new gas sales agreement, concluded in 2020 with ENGIE, we commenced delivery of gas by the end of 2021, as per the contract.

2021 Indicators for PEPN are shown compared to 2020 and 2019; additional details are also available through the following sections of this Sustainability Report and in the statutory Annual Report.





HSE Indicators<sup>3</sup>



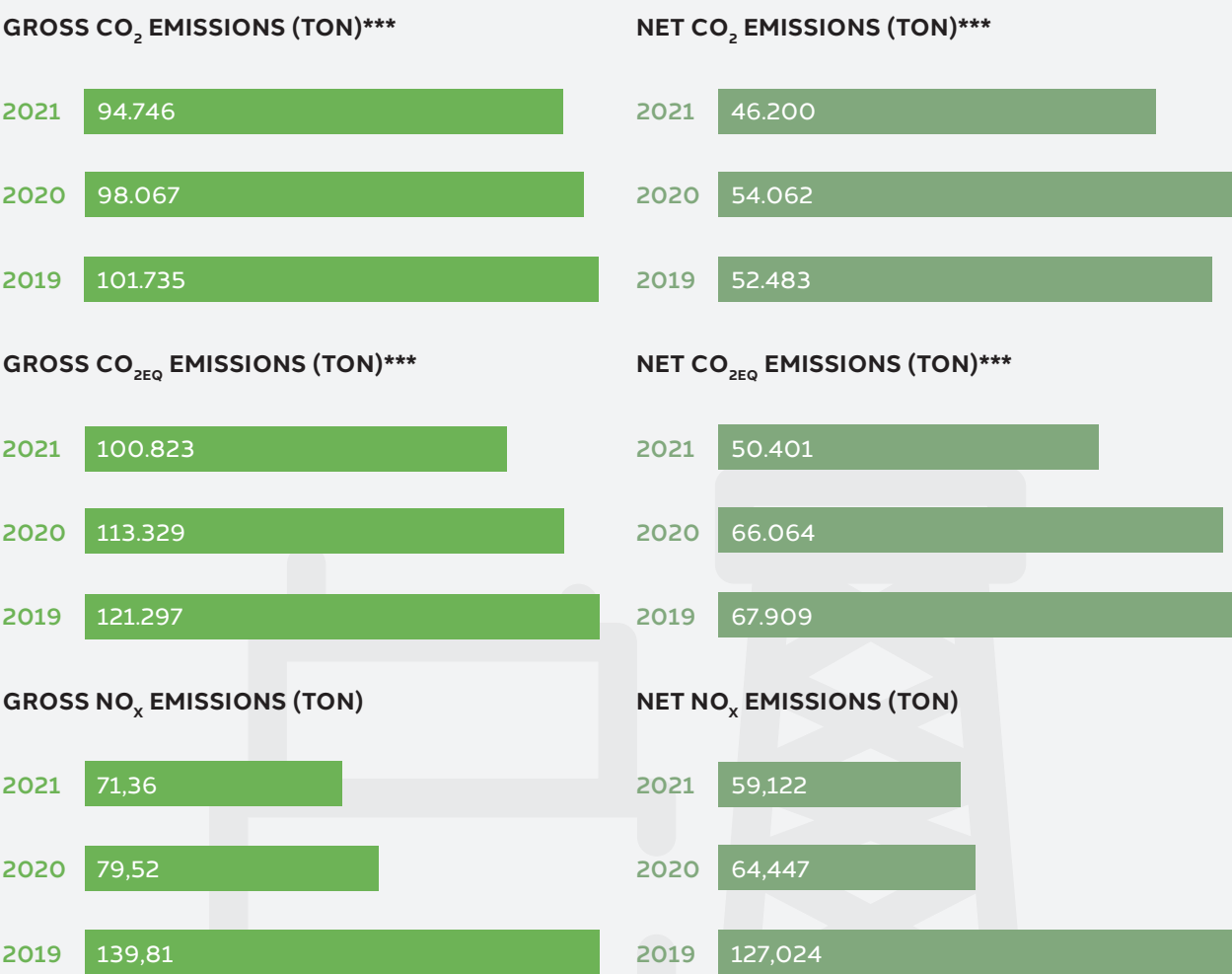
\* Number of Severe Injuries / Lost Time Injuries \* 1000000 / Manhours

\*\* Number of Recordable Injuries \* 1000000 / Manhours

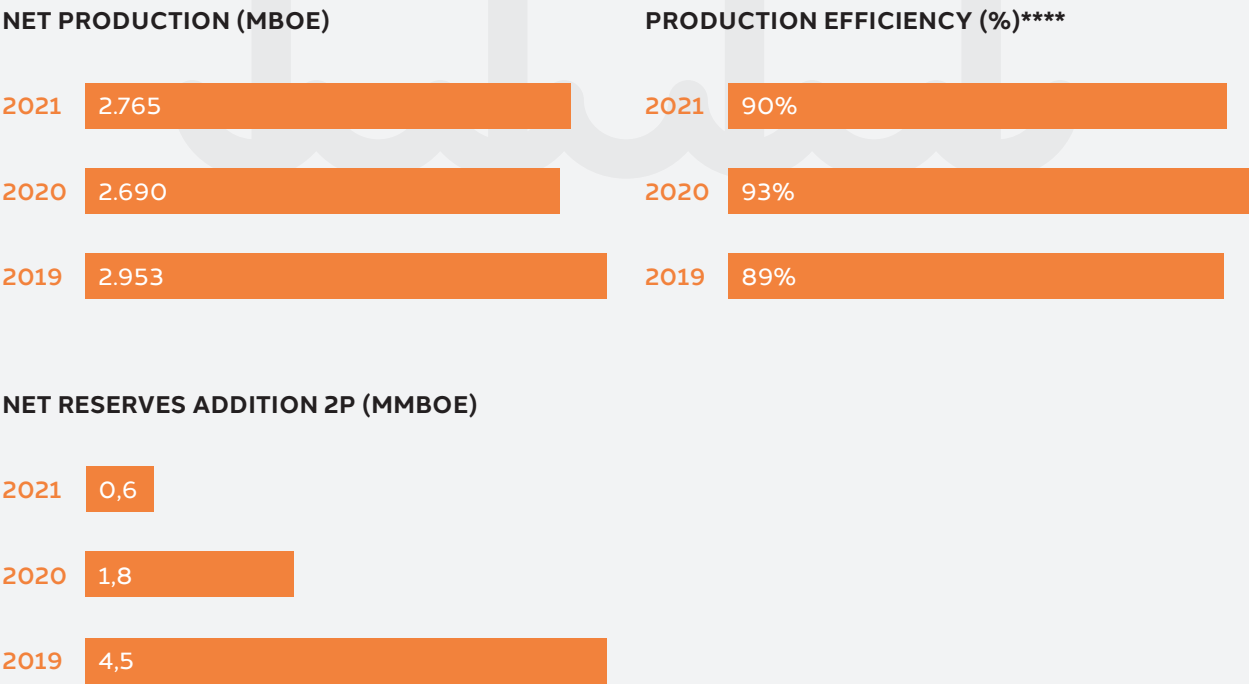
\*\*\* Scope 1 Emissions

\*\*\*\* The ratio of actual production to the Structural Maximum Production Potential excluding uncontrollable losses

<sup>3</sup> HSE Indicators are “gross”



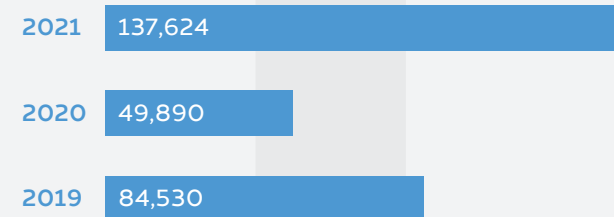
Production Indicators



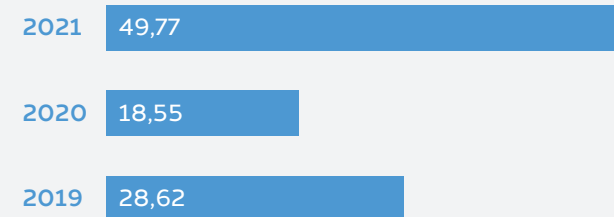


## Financial Indicators

### NET REVENUES (€M)



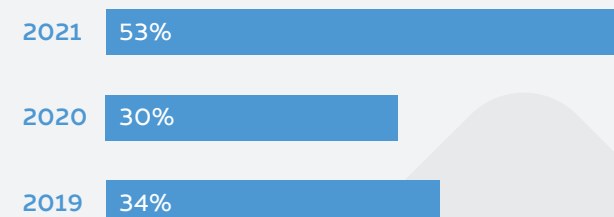
### NET REVENUES (€/BOE)



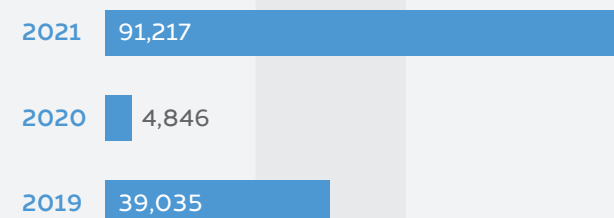
### NET OPERATING CASHFLOW (€M)



### NET CASHFLOW MARGIN (%)



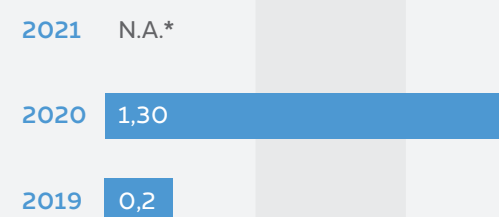
### NET EBITDA(X) (€M)



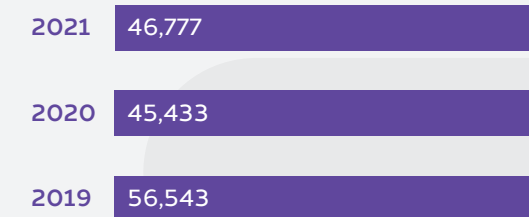
### NET DEBT (€M)



### NET DEBT TO EBITDA



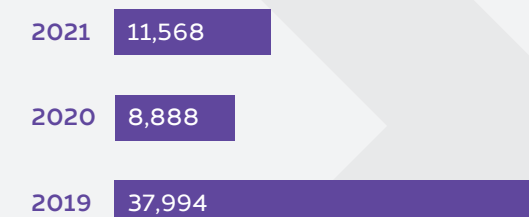
### NET OPEX (€M)



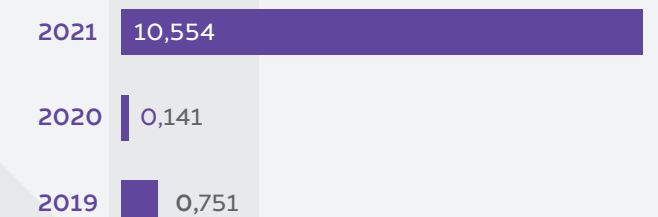
### NET OPEX PER BARREL (€/BOE)



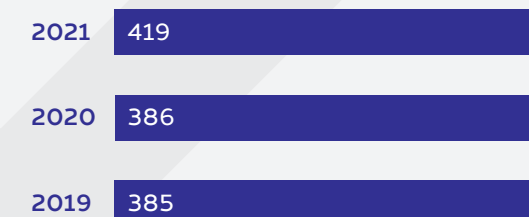
### NET CAPEX (€M)



### NET ABEX (€M)



### NET CONCESSION RENTALS (€M)



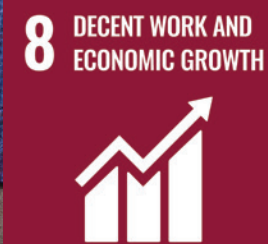
### NET RETRIBUTIONS (€M)



\* Net debt below zero



# GOVERNANCE AND BUSINESS ETHICS



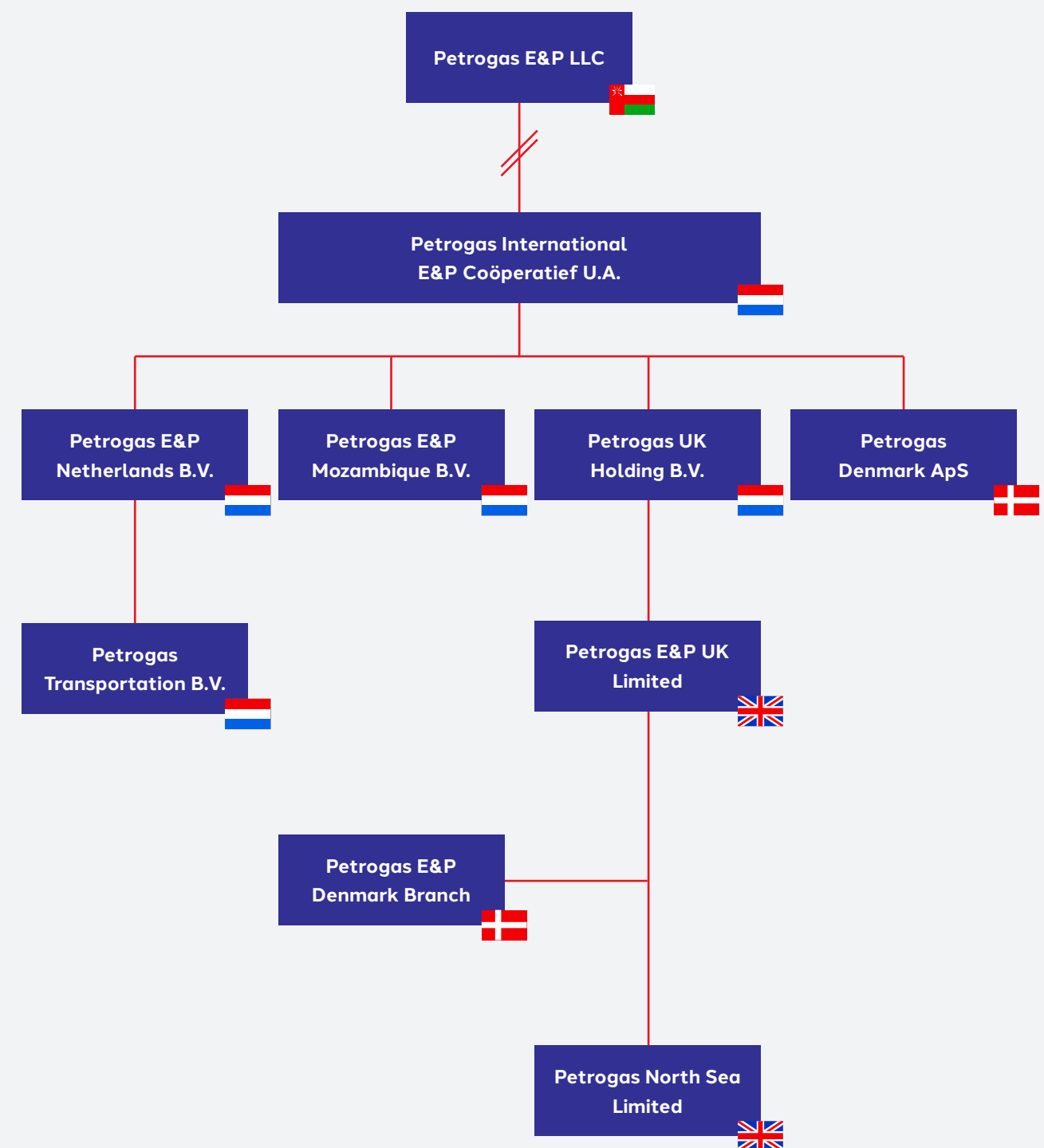
## 3.1 GOVERNANCE APPROACH

### 3.1.1 PEPN Ownership Structure

PEPN is 100% Subsidiary of Petrogas International E&P Coöperatief U.A., (PIEP) (incorporated in The Netherlands) which is the holding Company for Petrogas' European businesses. PIEP in turn is a

subsidiary of Petrogas Exploration and Production LLC (PGEP) which is the Corporate Office located in Muscat, Oman.

PGEP ultimate parent is the Mohammed Al Barwani LLC (MBH), which is a family-owned business controlled by the Chairman Mohammed Al Barwani.





3.1.2 PEPN Board of Directors

The purpose of the PEPN Board of Directors is to direct and control the Company’s business, overseeing strategic and operational decisions, ensuring that the Company meets its statutory obligations and that the Company achieves its mission and objectives.

The current Board is composed by members who have significant international experience in the Oil & Gas (O&G) business and were selected for their strategic competencies; three different nationalities are represented.



The Board of Directors meets every quarter to review the Company performance and alignment with the strategy, evaluating how the short-term operations effect the mid-term and long-term sustainability of the Company.

3.1.3 Societal and Ethics Committee

A Societal and Ethics Committee (SEC) was established in 2020 within PEPN to provide the right level of governance with respect to Environmental, Social and Governance (ESG) aspects; the Committee meets every quarter and reviews any open grievance either within the Company or outside the Company, provides resources and monitors the progress of the ESG agenda, reviews / endorses Community Outreach initiatives.

The SEC is composed of the Petrogas CCO, as SEC Chairman, the PEPN General Manager, the General Counsel, the Work Council Chairman, the Connect Team Chair and the HSEQ Manager, as SEC Secretary.

3.1.4 ESG Workgroup

The ESG Workgroup was established in 2020 within PEPN to drive the ESG initiatives and ensures these are cascaded through the organisation. The Workgroup meets every month.

The ESG Workgroup is composed by the HSEQ Manager as Workgroup Chair, the Financial Compliance Analyst, the SCM Manager and the Legal Counsel.

3.1.5 Business Excellence Leadership Team

The PEPN Business Excellence Leadership Team (BELT) is providing the governance to the PEPN BEMS and it is accountable for the safe and responsible execution of all activities in the Netherlands. The BELT has met monthly during 2021 and was composed of the whole PEPN Management Team plus the Legal Counsel, chaired by the General Manager and supported by the BELT Facilitator.

The BELT is composed by 13 members, 9 men and 4 women; 4 different nationalities are represented:



Subsequently a new General Counsel joined PEPN in January 2022; the General Counsel will be an active member of the PEPN Management Team and the BELT, replacing the Legal Counsel.

3.1.6 Partner Engagement

PEPN continues to value its interaction with Joint Operating Partners by conducting recurrent Technical Committee Meetings (TCM) and Operating Committee Meetings (OCM); ad-hoc meetings may also be organised during the year to address specific topics of interest for all parties; the regular TCM/OCM meeting includes a HSEQ review, allowing for discussion on HSE / ESG aspects. PEPN has various joint operating agreements and multiple

assets, with different equity levels, across the various licenses it operates in the Netherlands.



Participation	2020	2021
Technical Committee Meeting	24	24
Operational Committee Meeting	14	15

3.2 MANAGEMENT SYSTEM

PEPN Vision, Mission and Core Values are delivered through the Business Excellence Management System (BEMS); the BEMS is an integrated operating management system, which follows the ‘Plan, Do, Check, Act’ Deming Cycle.

The BEMS is an ISO 14001:2015 and ISO 45001:2018 certified Management System; in 2021, the BEMS Manual was reviewed and updated to increase visibility of the ESG aspects within the Management System; a gap assessment against ISO 26000 Guidelines was conducted and a plan to close the gaps defined; a verification audit against the “ISO 26000 CSR Performance Ladder” will be performed in 2022. The Accounting and Finance Process was also formally embedded into BEMS to ensure full alignment of all processes, given the increased focus on ESG; further, due to the future implementation of the Corporate Sustainability

Reporting Directive (CSRD), it was decided to formally assign the ESG accountability to the A&F Manager; a project started with PWC to support PEPN in the understanding of the implications of the CSRD and an ESG Analyst is currently under recruitment to streamline the internal processes.

The BEMS is governed by the Management System Process (MSP), which is a step-by-step approach that guides leaders through the annual cycle of aligning forward-looking Business Excellence (BE) objectives with continual improvement to manage our business profitably in a socially, safe and environmentally responsible manner.

The BEMS consists of 12 different processes and 45 sub-processes specifically designed to manage the exploration, development, production and transport of oil and gas in the Netherlands. The 12 processes are divided in 3 groups:



Management Processes
General Management
Operational Processes
Major Capital Projects
Operations
Planning and Commercial
Sub-Surface
Well Engineering
Sustainability Processes
Accounting and Finance
Human Resources
HSEQ
IT Management
Legal Affairs
Supply Chain Management

Each process is managed by a Departmental Manager, who is accountable for the execution of the PEPN policies and specific departmental policies and procedures within the requirements of local legislation, Corporate Requirements and international and national standards (e.g. ISO, EN, API, etc.).

In 2021, The Management Team (MT) maintained its historical composition: 10 men and 2 women; 3 different nationalities are represented. A new General Counsel was hired at the end of 2021 and started in January 2022.

**3.2.1 Risk Management**

The PEPN Risk Management Process is in place to identify Risks and Opportunities to prevent / mitigate negative and foster positive consequences. The Risk Management Process is owned by the PEPN General Manager. The Business Risk and Opportunity Assessment Register, or BROA, is a live document,

where any threat or opportunity for the Company is addressed and assigned to a responsible party (usually a Departmental Manager) for follow-up; actions for closing gaps or explore opportunities may be assigned to the workforce for further follow-up.

In 2021, the BROA was reviewed and revalidated to include risks and opportunities related to emissions reduction and reuse of infrastructure to support the Energy Transition effort and reach the Company Strategic goals of Net Zero in 2050. The risks and opportunities have been additionally coupled with the identified materialities and linked, where possible, to the United Nations Sustainable Development Goals (SDG).

**3.2.2 Review**

The BEMS functionality is internally and externally reviewed and evaluated through monitoring, such as audits, process self-assessments and BEMS Management Review. In 2021, 6 internal BEMS audits, 3 Corporate internal audits, 4 Contractors Management audits, 7 Finance and Tax audits, 1 ISO Audit, 1 Emissions Rights Audit, 1 SSM Inspection were executed.

The Process Self-Assessment is the tool used in PEPN to evaluate each process performance and address shortcomings and proposed improvements.

Each calendar year the BELT gathers to review the status of the management system in the “BEMS Management Review”; the objective of the Management Review is to determine the continued appropriateness, suitability and effectiveness of the BEMS. This process ensures that all necessary information is collected and available to enable the BELT to perform an effective evaluation. The review also addresses the possible need for changes to policies, objectives, targets and other elements of the BEMS considering audit results, monitoring activities, HSE performance data, regulatory action, changing circumstances and PEPN’s commitment to continual improvement.

The output of the Process Self-Assessment and the Management Review is used as input for the Business Excellence Plan of the coming year. In 2021, the Accounting and Finance Process was included in the Self-Assessment and Management Review, also in view of the further ESG integration into BEMS. The financials are audited by external 3rd parties, tax authorities and joint venture partners.

**3.2.3 Improvement Plans**

Based on scheduled and unscheduled reviews, performance evaluations, accidents and incidents investigations, audits, non-conformities, etc. improvement plans are created. Typically, PEPN addresses the main improvement opportunities in the BE Plan for the coming year; mid-term and long-term actions are captured, as well, in order to set tactical and strategical objectives. When required, other departments have additional Departmental annual plans (e.g. HSEQ Plan, HR Business Plan) to address additional lower priority opportunities.

Progress of the BE Plan is monitored in the BE Scorecard, including any other BEMS improvement actions coming from incidents investigations, audits, compliance and permit requirements and HSE risk assessments. In 2021, the BE Plan achieved 100% completion.

**3.2.4 PEPN Business Excellence Scorecard**

The annual goals are defined in the PEPN Business Excellence Scorecard in terms of leading and lagging indicators (e.g. Key Performance Indicators, KPI). In 2021, additional ESG oriented goals were added amongst the typical HSE and Business performance indicators, such as Methane Gas Venting. Based on the successes and less successful activities and events occurred in 2021, PEPN outcome was “above target”.

**3.3 BUSINESS ETHICS AND TRANSPARENCY**

PEPN always ensures legal compliance and best business ethical practices; in 2020, PEPN enhanced

this by unifying its own various legal and business ethical policies and procedures under one single policy statement, created a charter and reshaped the Environmental Social Governance to improve the awareness of and promote the adherence to those business ethical practices. The charter was used as a basis for creating the “PEPN Business Ethical Principles”, which is considered as the PEPN’s Code of Conduct and used in all our service contracts with suppliers and contractors in order to make our commitments binding to our business partners as well.

The grievance and the whistle-blowers processes are in place within PEPN; in 2021, one (1) occurrence was reported through the grievance process and appropriately addressed with no further follow-up required.

Other channels for internal resolution of conflicts are available within the Company including the Line Manager, the Prevention Officers and the Trusted Persons. The Company Doctor, as independent third party, is also available to act as recipient of complaints about the health and well-being of personnel. The Petrogas Prevention Platform has been created to provide PEPN workforce with a quick access to these resources as well as support (see section 6.2.2 for more details).

As an assurance process, the PEPN A&F Department is responsible for organising a self-assessment of the status of compliance with Company policies and procedures and all the relevant legal obligations. Annually in Q2, the process requires every Departmental Manager to review the current status of affairs and sign-off all the relevant aspects in relation to the performed activities during the year and review all the incorporated legislation changes in relation to the processes. The assessment is finally checked by the HSEQ Manager and General Counsel, before final sign off by the Manager A&F and the General Manager. The end result is the “PEPN Compliance



Letter”, a representation from PEPN to PIEP Management on all activities performed by the Company in compliance with the all the legal and business ethics requirements. The PEPN Compliance Letter was signed off in January 2022.

PEPN supports and welcomes transparency; PEPN submits an annual “Payments to Governments Report” to the Chamber of Commerce. The report outlines our payments to Dutch authorities, including taxes, royalties and other related information.

PEPN also discloses information to the Extractive Industry Transparency Initiative (EITI) of the Dutch authorities. The EITI focuses on the implementation of a global standard to promote good governance of oil, gas and mineral resources. This initiative should contribute to greater transparency in the mineral sector. For example, the EITI standard requires openness of information throughout the mineral industry value chain, from the extraction of minerals to the benefits to society. The EITI standard requires information to be made public about all steps in the mineral extraction process. All participating countries publish an EITI report annually. They prepare these EITI reports according to the EITI standard. In the report companies publish (disclose) data on what they paid to governments and governments will publish data on what they received.

A multi-stakeholder group (NL-EITI MSG) applies the EITI standard in the Netherlands. The MSG consists of representatives of the Dutch government, companies from the mineral sector and civil society organizations.

All companies are annually requested to provide their data through reporting templates. The data collected through the reporting templates are published by the NL-EITI MSG in the EITI report.

To ensure the completeness and accuracy of the data, the NL-EITI MSG has decided that all reporting templates submitted by extractive companies and government agencies should be signed off by a competent officer.

An Independent Administrator concludes that overall, the reconciled financial data from the companies and government agencies are sufficiently comprehensive and reliable.

PEPN is part of an Omani multinational group (MNE), therefore information of PEPN is included in a country-by-country report that aggregates tax information of the MNE per country relating to the global income, taxes paid and other indicators for the MNE group. This report is submitted by the MNE, via its local surrogate group (i.e. PIEP), to the Dutch Tax Authorities.

During the year, several audits are performed by external third parties (PWC, Tax authorities, etc.) on the Company financial statements and tax filings. PEPN’s financial statements are audited by PWC and during 2021 also several tax audits were performed (Wage-tax and CIT/SPS). When auditing the financial statements, PWC also audits the processes around the financial statements and discuss the outcome with Petrogas. Based on the outcome of the audits, Petrogas will amend the business processes, if needed.

### 3.3.1 Business Ethics Training

In Q3 we launched an online training on Business Ethics within the Company; the training aimed to provide the workforce with awareness about, amongst the other, trade and sanction, anti-bribery, anti- money laundering, anti-fraud policies and procedures. At the end of December 2021, ~95% of personnel completed the training.

### 3.3.2 Conflict of Interest

In 2020, the Corporate Conflict of Interest was updated and submitted to the whole PEPN workforce; at the end December 2021, ~98% of PEPN read and signed off the updated policy.

### 3.3.3 Ethical Procurement

As part of Supply Chain Management Process, the Supply Chain Team completed the annual online

training organised by CIPS on Corporate Ethical Procurement and Supply. The training was extended also to other members of the organisation (e.g. ESG Workgroup).

### 3.3.4 Public Advocacy and Lobbying

PEPN is not directly engaged in lobbying activities; PEPN is however an active member of NOGEPA, which acts as Public Advocacy agent for the E&P sector in The Netherlands in the effort to contribute to an open and transparent transition to sustainably energy supply. NOGEPA engages the various Dutch Ministries and Authorities at strategic level in order to ensure E&P interests are heard and issues concerning Health and Well Being of the Workforce (e.g. Chromium VI exposure), environmental and permitting requirements (e.g. Nitrogen deposition) and general exploration and production activities (e.g. Small Fields development) are discussed at policy level.

PEPN is neither directly nor indirectly contributing to candidates, politicians or political parties with resources. A process is in place to prevent and report potential acts of lobbying.

Besides contributions to local charities (see Section 7.3), here below are the gross fees PEPN paid in the period 2019, 2020 and 2021.

Sponsoring / Participation	2019	2020	2021
Delftsch Studenten Corps (DSC)	€ 3.000	€ 1.200	-
Utrechtsch Studenten Corps (USC)	-	€ 400	€ 1200
Utrechtse Aardwetenschappen Vereniging (UAV)	€ 500	-	€ 520
Petroleum Geologische Kring (PGK)	€ 750	-	-
Society of Petroleum Engineers (SPE)	€ 2.000	€ 2.000	€ 2000
NAP Stichting	€ 850	€ 850	€ 850



**Tom Cramer**

Cash Management &  
Insurance Analyst

*During the relatively short period I am working at PEPN, I have noticed that the topic regarding compliance and transparency has become a more important one. This topic is not only important for Petrogas itself, but also for their external stakeholders. More and more external stakeholders have put extra focus on their KYC (Know Your Customer) process, requiring transparency from our side. Where in previous years the focus was on the financials, this focus has now shifted more to ESG. In my role, I am assisting with the deliveries of the KYC requests for the Petrogas Europe Group, making sure that the correct information is delivered and the external stakeholders are happy to do business with PEPN.*



# CLIMATE CHANGE AND ENERGY



## 4.1 CLIMATE STRATEGY

Being an oil and gas upstream Company, our role in society is to ensure our production is as safe and efficient as possible, minimising the impact to the environment. As an Oil and Gas producer, there is significant attention to decrease the Scope 1, 2 and 3 emissions as much as possible, and, as such, to achieve the strategic goals determined by the European Union for 2030 and reach carbon neutrality by 2050. In 2021, we reviewed our legacy data to establish our baseline for emissions in 1990 in line with the Paris Agreement [7], the European Green Deal Fit for 55 [8] and the Dutch Coalition Agreement [9]. A more detailed analysis of Scope 2 and 3 emissions will be forthcoming in the next two years.

PEPN continued to pursue short-term and long-term strategies to reduce the greenhouse gas (GHG) emissions and enhance energy efficiency. Specific attention was given during contract selections (e.g. greenfield projects, brownfield projects, decommissioning) to identify and select contractors with a clear climate strategy.

Environmental impacts in terms of GHG emissions reduction and Energy Efficiency are becoming fully embedded in our day-to-day discourse and a central theme in Board of Directors meetings and Decision Review Committees meetings. The PEPN Environmental Aspects Register is used to track environmental risks and opportunities and to explore improvement options. Specific climate change leading metrics have been added in the PEPN Scorecard to further stimulate ingenuity and creative solutions to reduce the Company footprint.

## 4.2 TECHNOLOGY

In 2021, we completed the Front-End Engineering Design (FEED) for the A15 and B10 installations. The A15 and B10 installations are planned to be constructed in 2022 at HSM yard, in Schiedam and installed in 2023 on top of the A15 and B10 fields of the Dutch Continental Shelf (DCS). These installations are designed to be totally automated

and with very limited power requirements and zero operational emissions. Power will be provided to the installation via an umbilical cable connected to the existing infrastructure (A12-CPP). An array of solar panels will be installed during the installation phase to add an additional source of power to support the start-up phase. The simplicity of design and the high reliability of the installation will lead to less interventions, therefore limiting the need to travel to the location. Ideally, the platforms will be serviced once or twice a year by means of a Walk-to-Work vessel (W2W). To compare, at this moment, the other unmanned facilities in the A/B blocks, A18 and B13 are visited every 6 weeks, on average, via helicopter to inspect, maintain and fix equipment, due to their higher complexity with respect to A15 and B10 design. The same A15 and B10 platform design will be potentially utilised to produce from the B16 field, which is targeted for future development.

The majority of our CO<sub>2</sub> emissions are coming from the A12-CPP, due to the power requirements of the gas-driven compressors needed to export our gas via the NOGAT pipeline; in order to find a way to reduce those, in 2021, we initiated the Beaufort project, with the intent to develop a plan to reduce emissions from the platform, testing various concepts. One ambitious concept is a 'fully electrified' scenario, requiring power from two (2) 7 MW Windmills, which would need to be installed close to A12-CPP, reducing Scope 1 emissions to almost zero. At present, since there are no windfarms near the A12-CPP, any electrification solution would have to be installed by Petrogas. The initial assessment showed that a fully electric project would be uneconomic, but also not achievable in the time frame for AB production life. However, we are continuing the project to reduce emissions, testing a full range of concepts (also including hybrid solutions, advanced heat recovery, etc.) and we are working with the Ministry of Economic Affairs and Climate (MEAC) to find ways to make these ambitious projects work (by unlocking procedural / legal obstacles and commercial challenges). We are

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also working across the industry to develop other opportunities for reducing emissions, such as reducing the NOGAT export pressure, which will allow us to run smaller compressors and, therefore, reduce our Scope 1 CO<sub>2</sub> footprint. Although the use of windmills is challenging for us at the moment, we made use of solar panels to power the Helm Platform in her new “Lighthouse Mode” life. As part of our decommissioning strategy, in 2021, we went from “Idle Mode” to “Lighthouse Mode”. This mode will last until HMC will find the best window for them to remove and dispose the platform. In Lighthouse Mode, the platform will be only visited once per year for a general integrity survey or in case the navigational lights need servicing via a W2W vessel. The same approach will be applied to all the other P/Q facilities, Haven, Helder, Horizon and Hoorn, in 2022 onwards.

4.2.1 Carbon Capture and Storage

In our long quest of pursuing Carbon Capture and Storage (CCS), in 2021 we ran additional studies to verify the compliance of the Q1 reservoir to the

stringent environmental constraints required by the Dutch legislator. Therefore, while plugging and abandoning the Q1 Helder wells, we used CCS compliant internal cement plugs. The cement bond was verified with cement evaluation logs and any cement degradation is eventually rectified by the ductile nature of the Vlieland shale caprock.

In tandem with our internal studies, we continued to engage with the stakeholders and monitor the CCS landscape in the Netherlands in order to be ready to position ourselves as a competitive market option. Our studies still maintain that the Q1 area can be a significant ‘carbon sink’ and the technical advantages of aquifer storage offer an attractive solution for safe storage of CO<sub>2</sub>.

4.3 EMISSIONS

During 2021, we have seen a stabilisation of our emissions, although we were still able to achieve additional reductions in absolute and relative terms, primarily, thanks to the initiatives taken in the previous years. It must be noted that all emissions figures

shown in the next sections are gross and do not take into account equity shares, royalties, etc. An overview of the net GHG emissions is given in section 4.4.

4.3.1 Baseline establishment

Following the Paris Agreement criteria [6], in this year Sustainability Report we have added the 1990 data as baseline year to benchmark the operational emissions of last 5-year period. Although in 1990, the Helm, Helder, Hoorn and L11b were under PEPN (then Unocal Nederland B.V.) operational control, since L11b was later sold, the relevant emissions of that installation have not been taken into account to establish the overall value, following the “The Greenhouse Gas Protocol” [7]. After 1990, the Horizon platform (1993), the Halfweg platform (1995), the A12-CPP (2007), B13 (2011) and A18 (2017) have been installed and taken into account in the overall figures.

4.3.2 Methane Emissions

In 2017, PEPN adhered to the NOGEPA covenant [9] on Methane (CH<sub>4</sub>) emissions reductions; the covenant

officially stopped at the end of Q1 2021, but we continued to pursue our goal to reduce emissions. With respect to the baseline year of 1990, at the end of 2021, we have achieved ~84% reduction in CH<sub>4</sub> emissions with respect to the start of the covenant in 2017 and 62% reduction with respect to 2020; both metrics are well above the initial target set at 50% by the industry. Initiatives to further decrease emissions are continuously sought after. A significant decrease will be achieved in 2022 with the Cessation of Production (COP) of Helder, Haven and Horizon.

Going in more detail, as depicted in Figure 4, between 2020 and 2021 a marked decrease of emissions from both the A/B Blocks (~45%) and the P/Q Blocks (~71%) has been achieved. Limited controlled venting was required during the drilling activities on A12-CPP for safety reasons. In the period 2018–2020, a series of projects were executed to reduce the total amount of Methane emissions, as part of the Methane Reduction Covenant agreed between NOGEPA and the MEAC. An overview of these measures is given below:

GROSS CH<sub>4</sub> EMISSIONS [TONNES]

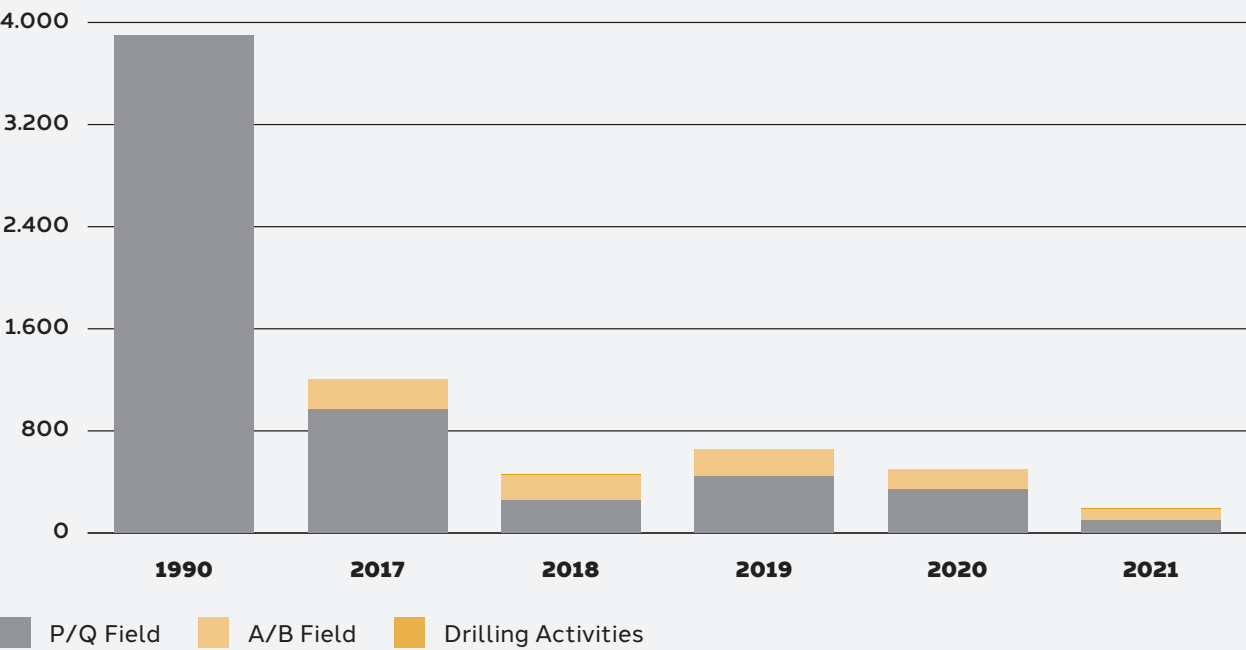


Figure 4 – Gross Methane Emissions Overview

Location	Source	Reduction measure	Implemented
A12-CPP	Compressor Seal Gas	Installation of Seal Gas Abatement System (re-use of seal gas as fuel gas)	2020
A12-CPP	High Pressure Vent	Reduction of blow down events by process optimisation and maintenance planning	2019
Hoorn	Crude Stabilisation	Re-routing of vent to fuel gas system (re-use of vent gas)	2020
Horizon	Crude Stabilisation	Increase separator pressure to reduce associated gas to the vent stack	2019
Helder	Crude Stabilisation	Re-routing of vent to fuel gas system	2019
Helder	Blanketing / Purge	Use of N <sub>2</sub> instead of fuel gas as blanket gas	2020

Table 1 – Methane Emission Reduction Program 2019 - 2020



In 2021, we monitored the applied changes (see Table 1) to verify their effectiveness to meet the Methane Reduction Covenant.

PEPN has long history of operating in the Netherlands initially in 1967 with the first offshore exploration and then in 1982, when the first Oil platform was installed, both under legacy owners; looking at legacy data, a dramatic decrease of Methane emissions can be appreciated, in particular, when referring to 1990, which is the reference year for evaluating the emissions as per the EU Green Deal.

Although in the last 30 years of history, the operational landscape has changed several times, the substantial decrease in absolute CH<sub>4</sub> emissions is demonstrated; a view to the GHG intensity (see Figure 10), will provide additional insight.

4.3.3 Venting

Looking at numbers from a different angle, it can be appreciated in more detail where the CH<sub>4</sub> emissions from operational activities are coming from; by doing this analysis, we can plan where to intervene to obtain a maximum impact in venting reduction. In particular, as shown in Figure 5, the highest contributor in CH<sub>4</sub> emissions was through venting, primarily from the high-pressure vent stacks, but there are also low-pressure contributors within the plants. Venting is sometimes required for safety reasons (e.g. emergency blowdowns); therefore, the aim is to limit as much as possible venting during normal operations and find a way to decrease the amount of venting during planned activities (e.g. yearly shutdowns, simultaneous activities, etc.). Emissions due to combustion engines are correlated to the specific emissions factors of the machine employed and actual fuel consumption. As part of detailed Scope 1, 2 and 3 Emissions analysis, we are continuing evaluation for opportunities for further reductions.

4.3.4 Carbon Dioxide Emissions

In 2021, we continued our effort to reduce CO<sub>2</sub> emissions (Scope 1). To have a better picture on the

overall Company footprint, we initiated a study to define our Scope 2 and Scope 3 emissions; this study will continue in 2022 onwards and will provide the basis to refine our emissions reduction programme to align with our strategical goals. A12-CPP, where the Emissions Trading Scheme (ETS) and the Dutch CO<sub>2</sub> Tax regime is applied, is still the biggest contributor of Scope 1 CO<sub>2</sub> emissions, primarily due to the gas driven compressors and the unique characteristics of the shallow gas reservoirs.

Similarly to the Methane emissions, it is expected that further reduction in CO<sub>2</sub> emissions will occur once the P/Q facilities will be moved into lighthouse mode; Navigation aids will be powered by renewable energy (solar panels), but the platforms will still require annual maintenance visits via vessels.

In terms of metrics, we achieved a 23% reduction with respect to 2017 and 5% reduction with respect to 2020. In details with respect to 2020, we reduced 30% of CO<sub>2</sub> emissions from the P/Q Block thanks to the partial decommissioning of the Helder wells; however, we experienced a slight increase in A12-CPP emissions (around 6%), primarily due to fields (pressure) depletion. As illustrated in Figure 6, changes in the operational landscape (section 4.3.1) between 1990 and 2017 had a significant impact on the Scope 1 emissions, relating to the development of the three shallow gas fields of the AB area, which require significant compression to export the gas, as required by the NOGAT pipeline pressure requirements to transport gas to shore at Den Helder.

As part of the ETS program, the A12-CPP emissions were verified by DNV as independent 3rd Party. The inspection included a visit on the platform, which was executed in combination with the periodical ISO 14001:2015 and ISO 45001:2018 verification audit. We submitted the report to the Dutch Emissions Authorities (NEa) in line with the requirements.

GROSS CH<sub>4</sub> EMISSIONS [TONNES]

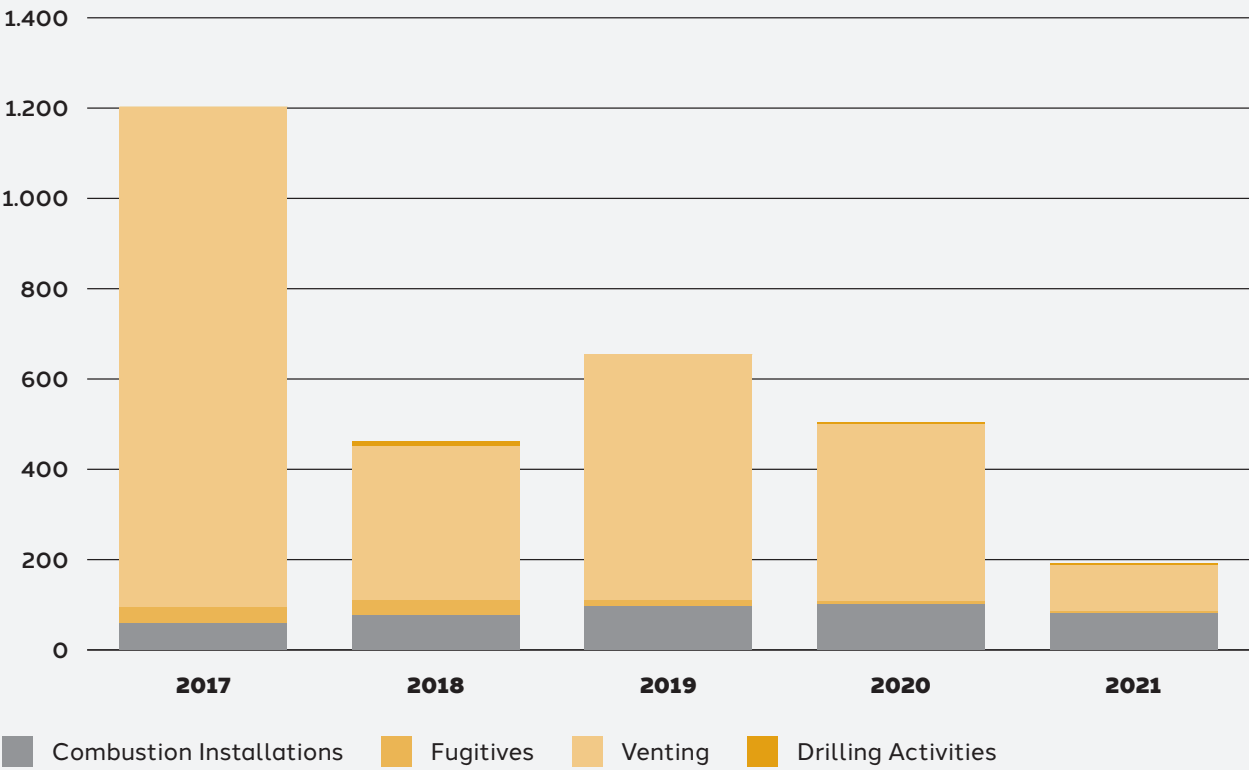


Figure 5 – Methane Emissions by Activity

GROSS CO<sub>2</sub> EMISSIONS [TONNES]

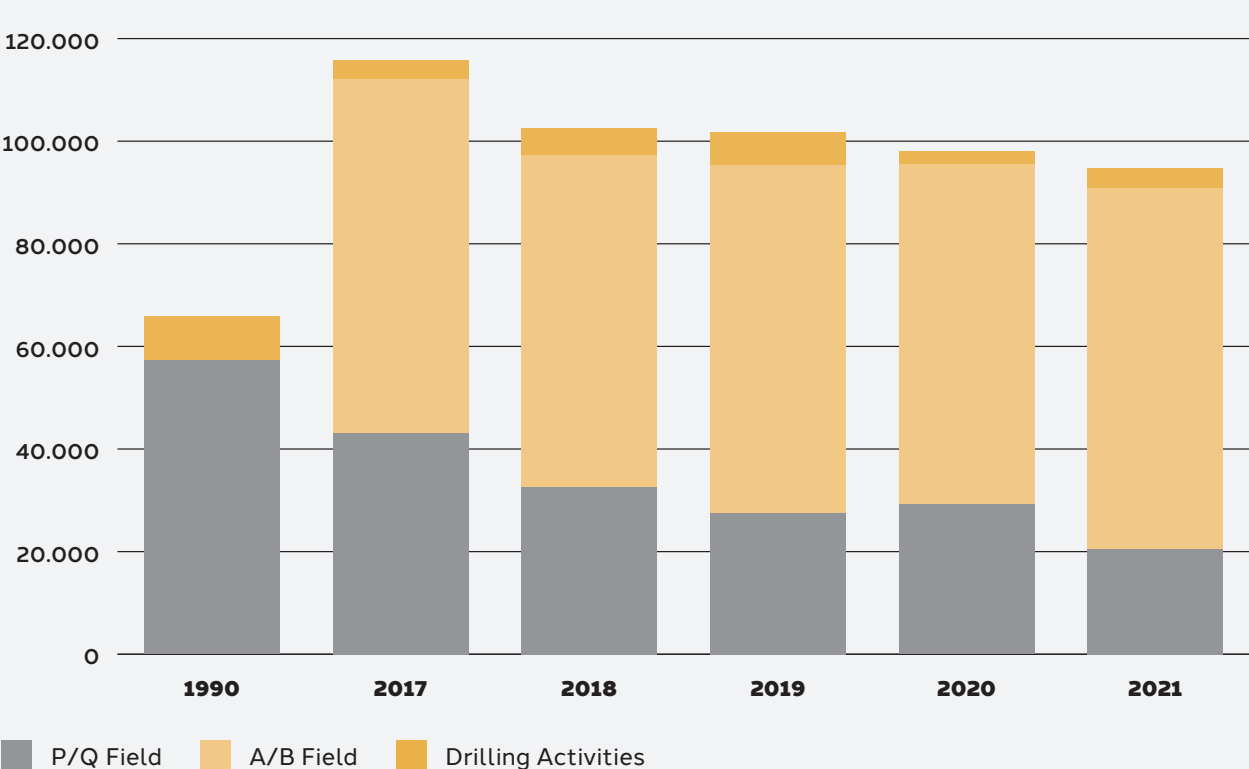


Figure 6 - Historical CO<sub>2</sub> Emissions



4.3.5 N<sub>2</sub>O and Refrigerants

Additional Greenhouse gases from our activities are N<sub>2</sub>O (generated during combustion) and refrigerants (due to fugitive emissions / seepages / leakage from cooling coils). In 2021, we recorded a slight decrease of N<sub>2</sub>O emissions and an increase of refrigerant losses (see Figure 7). The total GHG effect [9] is rather limited (0.39% of the total), when compared with direct CO<sub>2</sub> and CH<sub>4</sub> emissions.

N<sub>2</sub>O emissions are a result of the burning of fuel gas and diesel in combustion engines. The N<sub>2</sub>O emission factor of diesel is 9 times higher than that of fuel gas. PEPN continues to reduce the amount of diesel used offshore through swapping our diesel engines for gas engines or solar (for lighthouse platforms), thereby reducing N<sub>2</sub>O emissions.

Refrigerants are used in cooling units offshore. Every year a maintenance survey is performed. If a unit needs to be refilled, it is assumed that the missing amount is evaporated and the amount is reported to the Authorities (SSM) in the yearly environmental reports; the emission of refrigerants varies from year to year based on the amount of

equipment that underwent maintenance, therefore a clear trend is not distinguishable. As per European legislation, the more harmful refrigerants, so called R-substances, are being phased out. Therefore, the footprint of these emissions is going down over time, and in absolute terms, the amount of refrigerants lost are in the order of kilograms per year and are only a small part of our total CO<sub>2</sub> equivalent emissions.

4.3.6 GHG Emissions

When combining the emissions with the substances' relative Global Warming Potential [9,10], (see Figure 8) shows the PEPN total gross CO<sub>2</sub> equivalent emissions. When 2021 is compared to the year 2017, we achieved 34% reduction, with a 11% with respect to last year. Compared to the baseline year 1990, we have achieved a 44% reduction in gross GHG emissions. More important is the continuous decreasing trend from 2017, being a testimony of PEPN's approach towards a more sustainable production and that we believe further emission reduction is achievable going forward as operational practices and technology evolve.

Figure 9 shows the interim emissions target required

to achieve the 2021 Dutch Coalition Government Agreement [8], setting the milestones to ultimately achieve the 2050 Climate Change target.

The COP and decommissioning of P/Q blocks will ultimately reduce our overall emissions further; the A/B fields emissions will remain fairly constant (the

GHG intensity will slightly increase due to reservoir depletion until A15, B10 and B16 are put online) without further Scope 1 emissions reductions initiatives (see Section 4.2).

N<sub>2</sub>O AND REFRIGERANTS EMISSIONS [TONNES CO<sub>2</sub>-E]

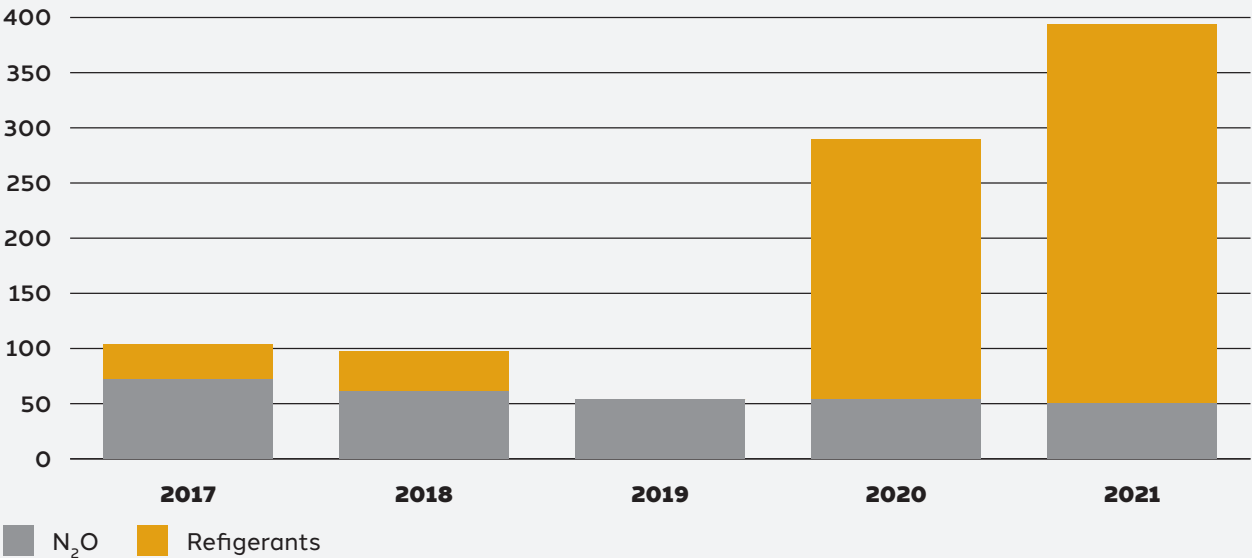


Figure 7 – Other GHG Emissions (N<sub>2</sub>O, refrigerants)

GROSS GHG EMISSIONS [TONNES CO<sub>2</sub>-EQ]

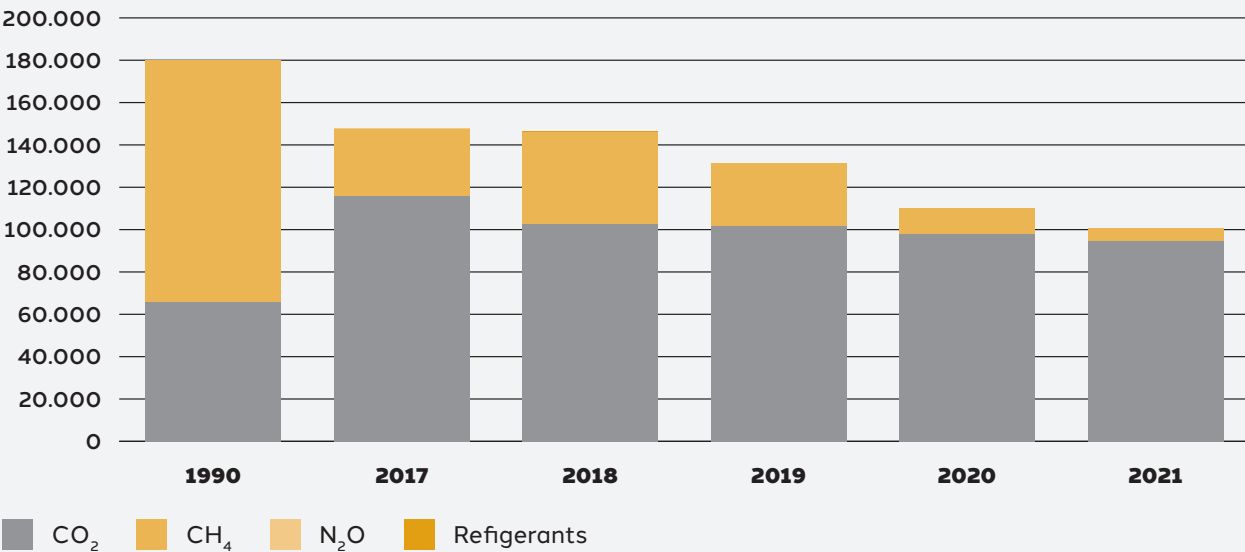


Figure 8 – Gross GHG Emissions

GROSS GHG EMISSIONS [TONNES CO<sub>2</sub>-EQ]

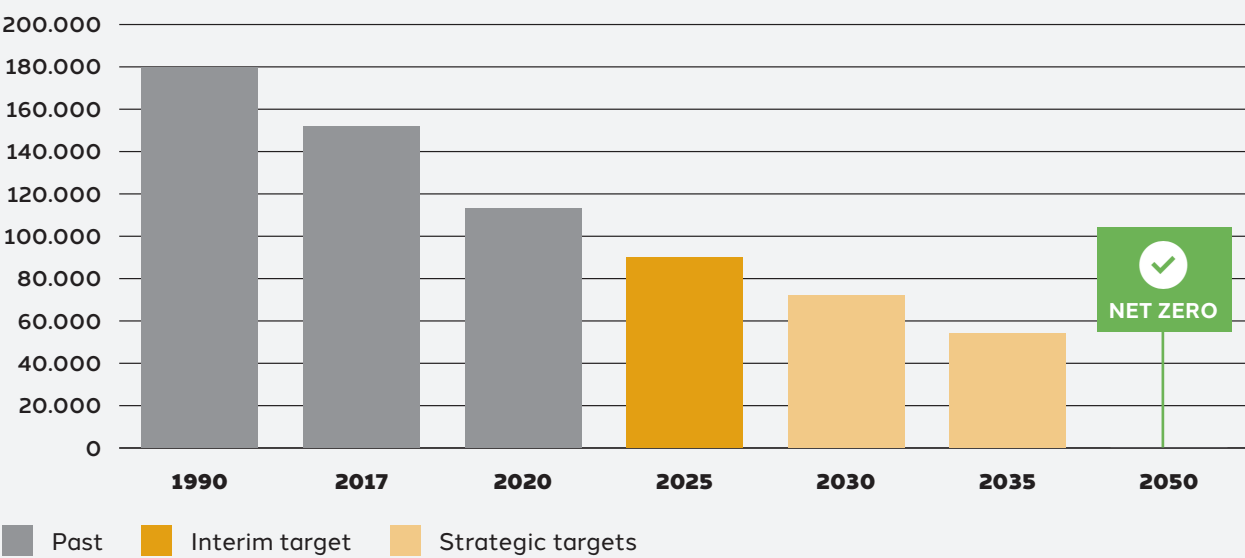


Figure 9 – PEPN gross CO<sub>2eq</sub> targets aligned to the 2021 Dutch Coalition Government Agreement



4.3.7 GHG Intensity

To better understand the overall Company Carbon footprint, the GHG Intensity is used to evaluate the ratio between and the total emissions equivalent in tonnes CO<sub>2</sub>e and barrel oil equivalent (BOE). Since 2017, the PEPN GHG intensity has decreased by 30%, while it decreased around 16% with respect to 2020. If compared with 1990, the decrease is around 61%; again, this relates to the change in the Company’s operational landscape with the introduction of the AB fields (*see section 4.3.1*).

4.4 NET GHG EMISSIONS

Throughout its history, PEPN has operated its assets in partnerships with several other companies through Joint Operating Agreements; taking into consideration the PEPN net ownership of these fields, the GHG emissions and the GHG intensity related to PEPN’s own (entitlement, excluding partner ownership) production are shown in *Figure 11* and *Figure 12*.

4.5 ENERGY USE

PEPN primarily generates its power by gas engines, with back-up diesel generators available in emergency situations. Due to the location of the platforms, we are currently not able to receive electricity from a grid. *Figure 13* shows the offshore energy consumption from 2017, where it can be seen that the vast majority of energy consumption is due to burning of hydrocarbons, primarily fuel gas. When looking at the energy intensity, the intensity of the P/Q fields is on average 5 times higher than the A/B fields, primarily due to the power requirements to extract oil from the reservoir via Electrical Submersible Pumps (ESP). With respect to 2017, the total energy consumption in terajoule decreased around 17% and 4% with respect to 2020.

In Q3, 2021, in the PQ area we accelerated the decommissioning activities, shutting-in wells (6) in a phased manner on the Helder platform, which reduced energy requirements of those ESP’s, abandoning these wells with our workover basket

whilst continuing to produce from the remaining wells. Furthermore, we have been making use of the available heat from produced water to aid decommissioning and cleaning activities, which has increased our efficiency whilst reducing our GHG footprint. If the well abandonment and cleaning had been left to after the platform had reached CoP or was in Idle mode, these activities would have required significant additional energy and related emissions, compared to the approach we have taken. It is expected that at the end of 2022, with the P/Q fields at COP, the overall energy intensity will also decrease.

PEPN strives to reduce the amount of diesel used offshore; this not only reduces logistics (and associated emissions and costs), but also has a positive effect to reduce the NO<sub>x</sub>, SO<sub>2</sub> and N<sub>2</sub>O emissions, as these are significantly lower from burning fuel gas compared to diesel. In the last years, the run hours of diesel engines to support normal operations have been significantly reduced and associated diesel consumption has decreased as well. It should be noted that once the fields reach CoP, and the decommissioning effort is in full swing, more diesel fuel will be temporarily used, as the gas supply to the fields is cut off. PEPN will strive to continue to look for more efficient and less polluting energy solutions to offset the use of diesel, such as solar panels.

PEPN committed itself to the Dutch energy-efficiency covenant, known as “Meerjaren afspraak Energie” (MJA). This covenant was introduced in 1992 as a collaborative effort of industrial companies and government authorities to improve energy efficiency of the industry. The latest phase of the covenant: MJA-3, was signed in 2008 and valid until the end 2020.

PEPN implemented the following energy efficiency measures in the period 2017-2020 (*see Table 2*). With the Covenant ended, as per 1 January 2021, PEPN now complies with the Energy Efficiency

GROSS GHG INTENSITY [TONNES CO<sub>2</sub>-E / BOE]

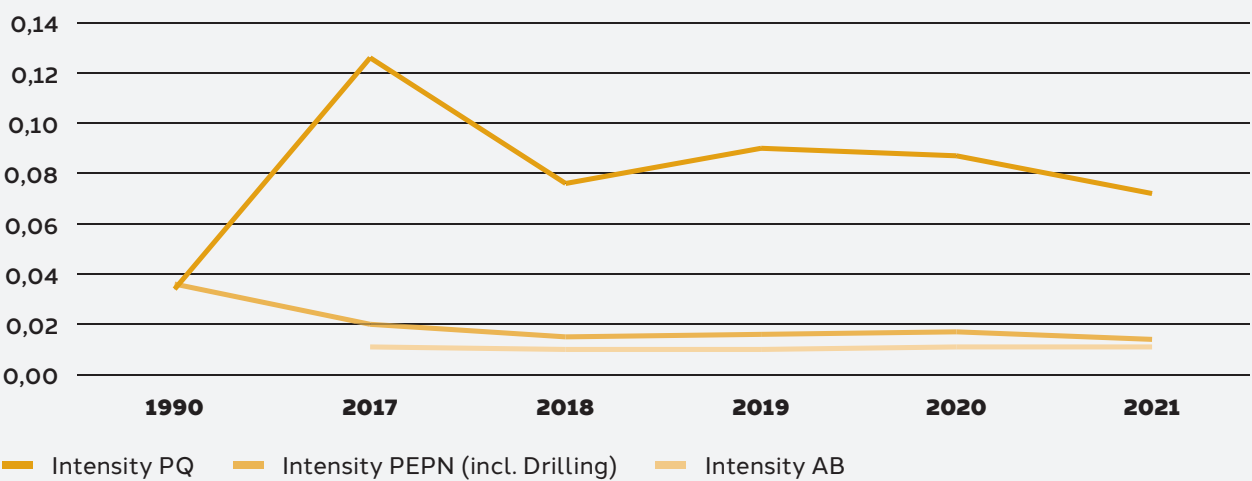


Figure 10 - GHG Intensity

NET GHG EMISSIONS [TONNES CO<sub>2</sub>-E]

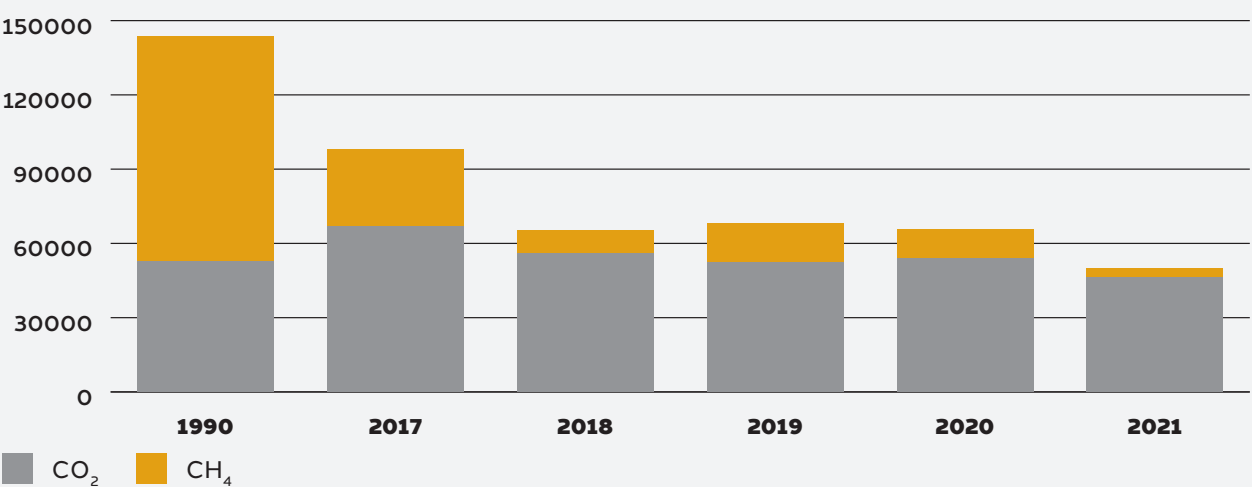


Figure 11 - Net PEPN GHG Emissions

NET GHG INTENSITY [TONNES CO<sub>2</sub>-E / BOE]

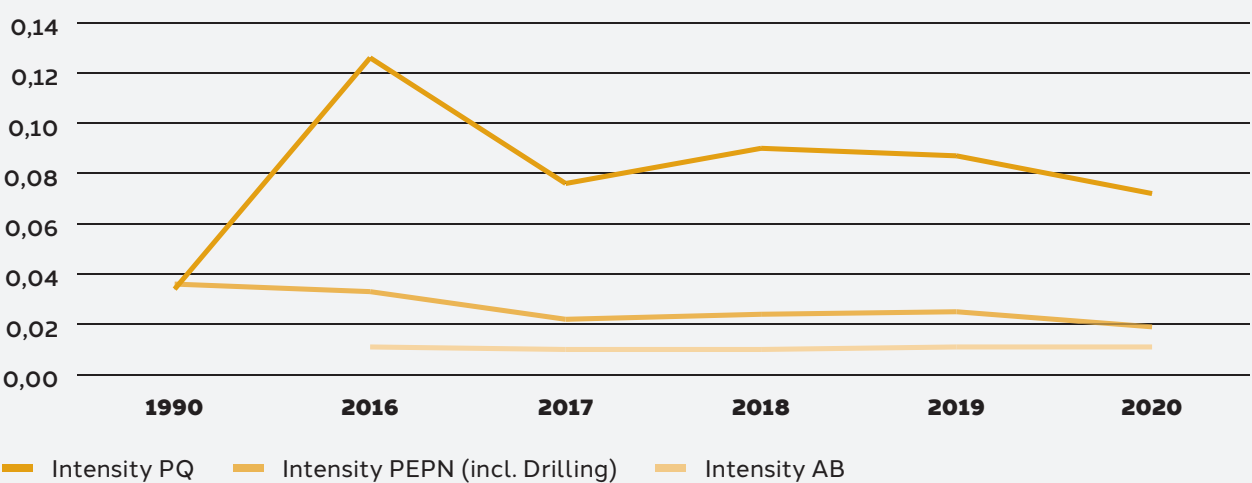


Figure 12 – Net PEPN GHG Intensity



Directive (EED). One of the requirements of the directive is to develop an EED Study to determine the total energy saving potential of the Company, both for offshore and onshore activities. This EED Study

has been performed in 2020 and was issued to Rijksdienst Voor Ondernemen (RVO), the competent authority in The Netherlands for the EED. Formal approval of the study was received in Q2 of 2021.

#### GROSS ENERGY CONSUMPTION OFFSHORE [TJ]

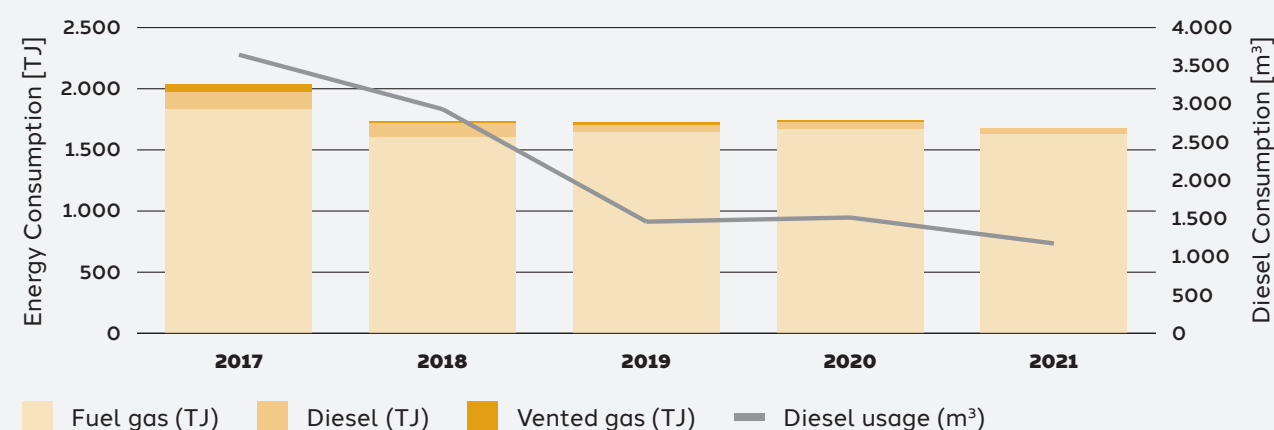


Figure 13 – Gross Energy Consumption Offshore

#### GROSS ENERGY INTENSITY [GJ / BOE]

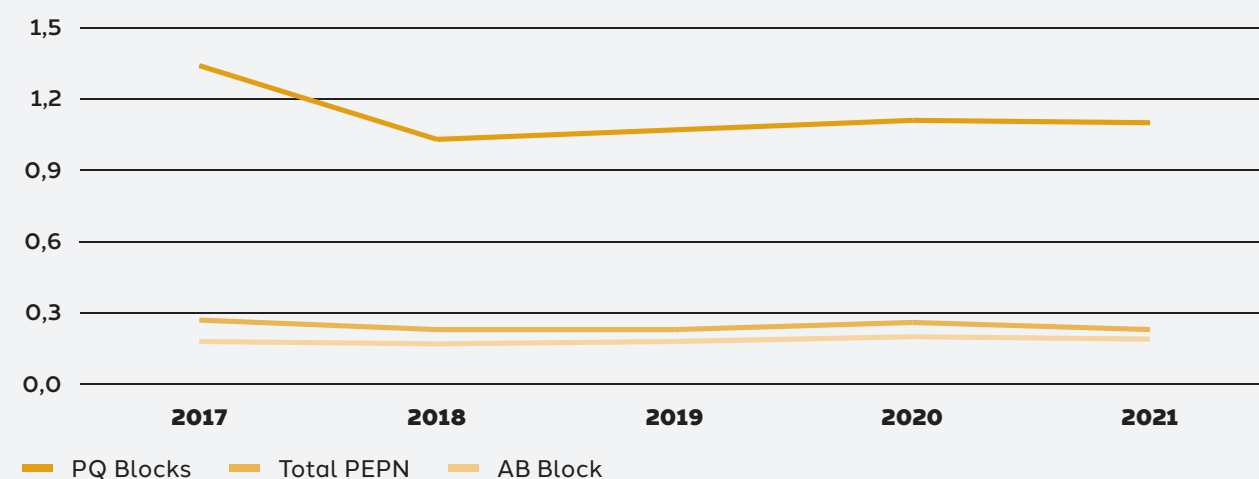


Figure 14 – Gross Energy Intensity

#### 4.6 FLARING

As a standard practice PEPN, does not flare from its facilities, nor does it have an active flaring program. However, during the drilling of new production wells, there is a requirement for a short flaring period (24 to 48 hours) to clean up the wells ahead of gas production. In these scenarios, the flaring activities

are executed via specialised equipment on Heavy Duty Jack-up drilling Rigs and are conducted in full accordance with the environmental permits. PEPN introduced the application of nitrogen lifting technology in 2017, resulting in a significant reduction of flared gas (~60%), whilst still achieving our aim to clean the well ahead of production.

Activity / Reduction Measures	2017 [TJ]	2018 [TJ]	2019 [TJ]	2020 [TJ]
Reduction of offshore helicopter flight hours	4.7	4.2	2.3	6,5
Power Generation upgrade A12-CPP		73.5		
Power Generation upgrade on Helder			171.2	
Reduction of venting on Hoorn and Horizon		45.4		
Transfer to a more efficient office (A label)	0.5			
Re-use of compressor seal gas to fuel gas system on A12-CPP				4.2
<b>Totals</b>	<b>5.2</b>	<b>123.2</b>	<b>173.4</b>	<b>10.7</b>

Table 2 – Energy Efficiency Measures

Year	Well	Rig	MMm³ flared <sup>4</sup>
2021	Horizon P09-A09 Sidetrack	Maersk Resolute	No Flaring
2021	A12-A10	Maersk Resilient	0.21
2021	A12-A7-S2	Maersk Resilient	0.13
2020	B13-A2-S1	Maersk Resilient	0.37
2019	Horizon P09-A09 (HZW)	Maersk Resolute	0.0013
2019	A15-A5	Maersk Resolute	No flaring
2019	B10-O4	Maersk Resolute	No flaring
2018	Well A18-A5	Maersk Resolute	0.71
2018	Well A12-A4-S1	Maersk Resolute	0.32
2018	A12-A7	Maersk Resolute	No flaring
2018	Well A12-A9	Maersk Resolute	0.32
2017	Well A18-A4	Maersk Resolute	0.17
2017	Well A12-A8	Maersk Resolute	0.28
2017	Well A12-A9	Maersk Resolute	0.19
2016	A18-A1	Paragon C20052	1.01
2016	A18-A2	Paragon C20052	1.71
2016	A18-A3	Paragon C20052	1.17
2015	No wells completed in 2015	N/A	N/A

Table 3 – Flaring Activities

<sup>4</sup> MMm³ = 1,000,000 m³



# ENVIRONMENT

3 GOOD HEALTH  
AND WELL-BEING



6 CLEAN WATER  
AND SANITATION



12 RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



14 LIFE  
BELOW WATER



15 LIFE  
ON LAND



PEPN has a mature ISO 14001:2015 certified management system; as an integral part of BEMS and the HSEQ Process, the Environmental Stewardship (sub)process is well established to identify environmental and social health impacts related to our offshore and onshore activities, evaluating risks based on available preventive and mitigating measures and identify opportunities for improvements.

## 5.1 WATER

### 5.1.1 Fresh Water

PEPN does not make use of natural fresh water sources to conduct its operational business. Potable water for personal use and cooking is either transported via Supply Vessel from Den Helder and bunkered in installations' drink water tanks (Helder, Hoorn and Helm), or produced offshore, using seawater by means of Reverse Osmosis units (A12, A18, B13 and Horizon). The office and supply base uses water from Rijswijk and Beverwijk cities' water supply. The amount of potable water kept offshore is limited, based on standard quantities per person, in order to maintain good hygiene practice.

The quality of Potable Water is managed by regular testing to verify compliance to the required biological, chemical and physical parameters (for more details refer to Section 6.2.3).

PEPN only operates production offshore, there is no impact on communities with respect to potable water or sanitation.

### 5.1.2 Discharged Water

Stormwater can potentially come in contact with any pollutants (e.g. the platform process and utility areas), and therefore is collected in the open drains systems and discharged overboard after water treatment to remove contaminants. The discharged water is sampled regularly and tested by an



DISCHARGE OF PRODUCED WATER [MMm³]

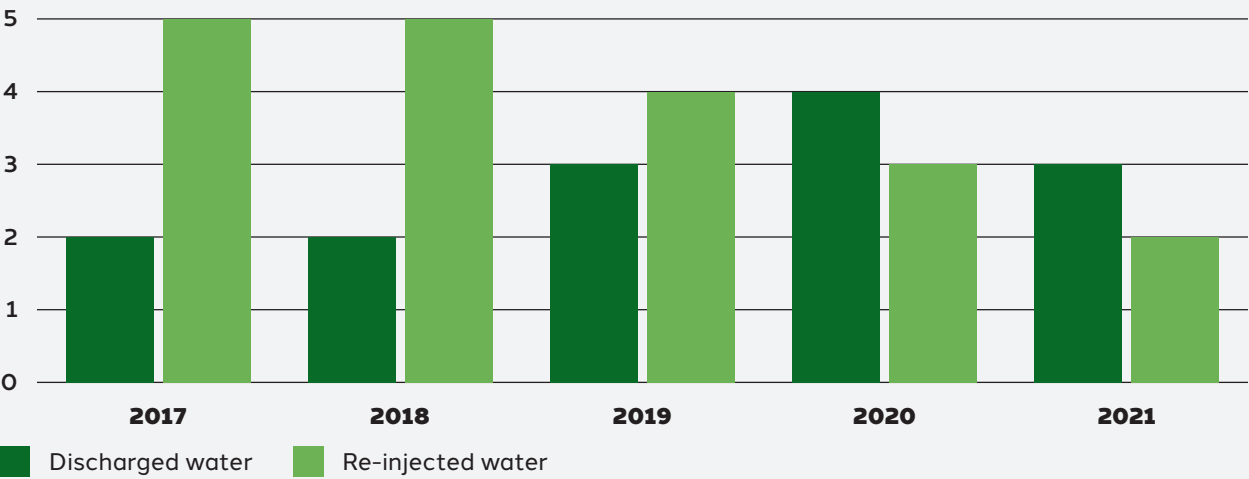


Figure 15 - Discharged and Re-Injected Produced Water

Location	DISCHARGED WATER [MM³]		%	INJECTED WATER [MM³]	
	2020	2021		2020	2021
A12	0.006	0.003	-51%	0	0
A18	0.000108	0.000092	-15%	0	0
B13	0.002	0.001	-48%	0	0
Helder	3,042	1,755	-42%	2,995	2,124
Helm	0.002	0.001	+11%	0	0
Hoorn	0.001	0.002	+17%	0	0
Horizon	1,244	809	-35%	0	0

Table 4 – Produced Water Metrics

DISPERSED OIL AND BTEX [TONNES]

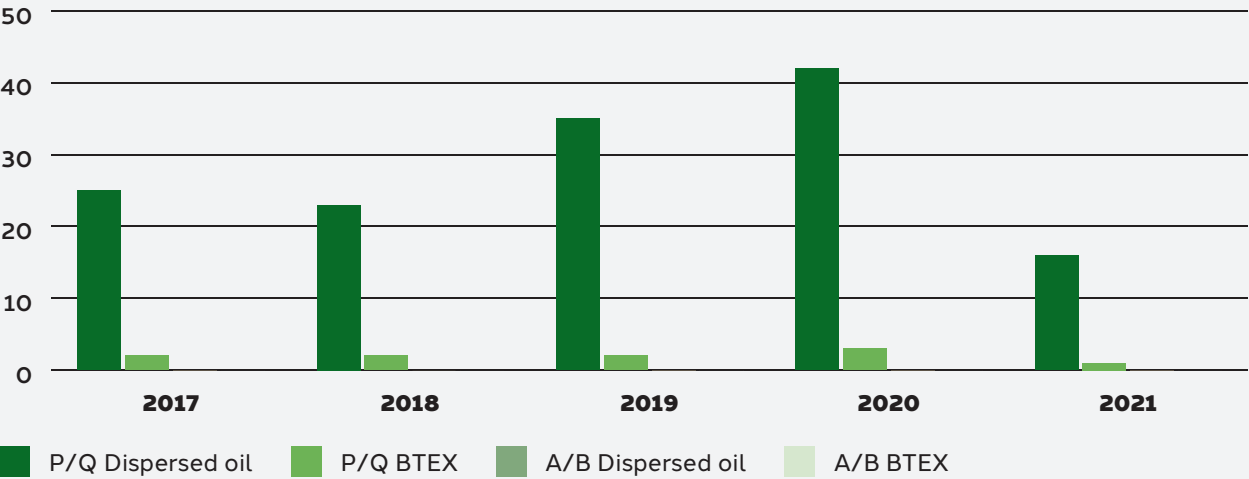


Figure 16 – Dispersed Oil and BTEX

independent laboratory. We continue to take water samples also on our non-producing platforms.

Produced water is collected within the closed drains system, routed to drains tanks and treated before either re-injection into a dedicated reservoir (on the Helder platform) or discharged to the sea. The quantities of water discharged (*see Figure 15*) and injected are monitored and reported to SSM as per statutory requirements.

The main contributors to total discharged, dispersed and BTEX load are the Helder and Horizon platforms. In view of the upcoming P/Q fields Cessation of Production (COP) and following the decommissioning of the platforms, the amount of discharged water and associated dispersed oil and BTEX will be reduced drastically in 2022. In 2021, compared to 2020, we have measured a substantial decrease in all the metrics associated with produced water (*see Table 4*).

Since the dispersed oil and the BTEX is directly linked to the amount of produced water, a similar decreasing trend can be observed (*see Figure 16*); the contribution of the A/B fields to the total is very small, as gas production has significantly lower produced water compared to oil production.

5.2 BIODIVERSITY

Offshore installations in the North Sea have positive and negative impacts on biodiversity. After installation of a platform or a pipeline, there is a short-term negative impact to the local flora and fauna. This temporary local disturbance, created by installation vessel movements and noise, causes any fish and cetaceans in the vicinity to leave the area of installation. Whilst there is limited seabed flora in our operating areas, this will be affected where there is installation and trenching activities.

In the medium and long term however, during the lifetime of the installation, an increase of biodiversity in the area is observed. The platform structure will create a substrate where molluscs can anchor and thrive, fishes will find more food and shelter within the platform jacket area, as well as protection from fishing which is not allowed within the 500m exclusion zone around each platform. The increased biodiversity then attracts cetaceans, such as porpoises, that can thrive in the vicinity of platforms.

In 2021, we undertook the UDS3 Drilling campaign on A12-CPP (campaign started in late October 2020 with B13-A2-S1 well), which required measures to be put in place to prevent and mitigate adverse impact to the local fauna. This relates to porpoises & birds, as well as the onshore flora due to nitrogen accumulation as per the Nature Permit [11] and Environmental Permit [12]. For this project, we made use of existing well conductors, therefore underwater piling was not required. Due to this, noise generated by the drilling activity was limited and no special precaution was required to mitigate noise levels. However, a bird control procedure was implemented to prevent impacts to migratory flocks during the flaring activities associated with the well clean-up. Also, care was taken to ensure no unnecessary lights to water surface were active on the drilling rig, other than those required for safety reasons. No actual impact was recorded during the same activities. Requirements regarding nitrogen depositions will be described in Section 5.3.1.

PEPN is in the process of evaluating the best option to remove the Halfweg Gravity Based Structure (GBS), which supported the Halfweg Topside until January 2019, when it was removed. As part of the comparative assessment process to understand the best removal options for the base, PEPN sponsored the Wageningen University to conduct an independent study on the ecological implications of removing the GBS to the flora and fauna of the area.



5.3 OTHER AIR EMISSIONS

The other air emissions, which are relevant to PEPN, are NO<sub>x</sub> and SO<sub>2</sub>, which are generated by the combustion of fuel on the platforms for power generation.

5.3.1 Nitrogen Dioxides and Nitrogen Deposition

As part of the NO<sub>x</sub> Reduction Project, as initiated within NOGEPA, PEPN has been steadily decreasing its NO<sub>x</sub> emissions in the past years; by 2021, the PEPN emissions have been cut ~86% with respect to 2015 and 10% with respect to 2020; NO<sub>x</sub> emissions were reduced by changing out diesel engines with gas generators, limiting the number of running hours on back-up diesel generators and installation of SCR units on the Helder and Horizon platforms to break down the pollutants.

As part of Nature Permit [15] for the P9 Horizon A9 Well Sidetrack, a low-NO<sub>x</sub> emissions rig was employed to perform the drilling activities. The use of a technology similar to the one applied to the PEPN platforms, has allowed to cut NO<sub>x</sub> emissions by 98% for the rig

PEPN aims to reduce diesel consumption as much as possible, however, it remains the only solution to provide temporary short term additional power for

exceptional activities; for instance, during shutdown campaigns or construction / decommissioning. PEPN remains engaged to find solutions to minimise the impact (e.g. Stage V generators).

5.3.2 Sulphur Dioxides

SO<sub>2</sub> emissions for PEPN show a steady decline over the years, primarily due to the continued decrease of diesel consumption (see Figure 18): around 63% emissions have been cut with respect to 2017, with a slight 2% decrease between 2020 and 2021. Due to the decommissioning activities, this metric is going to fluctuate in the next years due to the requirement of additional temporary power units.

5.4 SPILLS

In 2021, unfortunately we recorded and reported four (4) spills to sea of hydrocarbons (see Table 5).

The spill quantities were estimated based on sighting observation using the Bonn Agreement Oil Appearance Code [17] and did not require any remedial response due to the limited size of the releases. It must be noted that two events were due to asset integrity (corrosion), while two were due to operations connected with decommissioning of oil assets. All events were reported to the Dutch Coastguard and State Supervision of the Mines.

GROSS NO<sub>x</sub> EMISSION (TONNES)

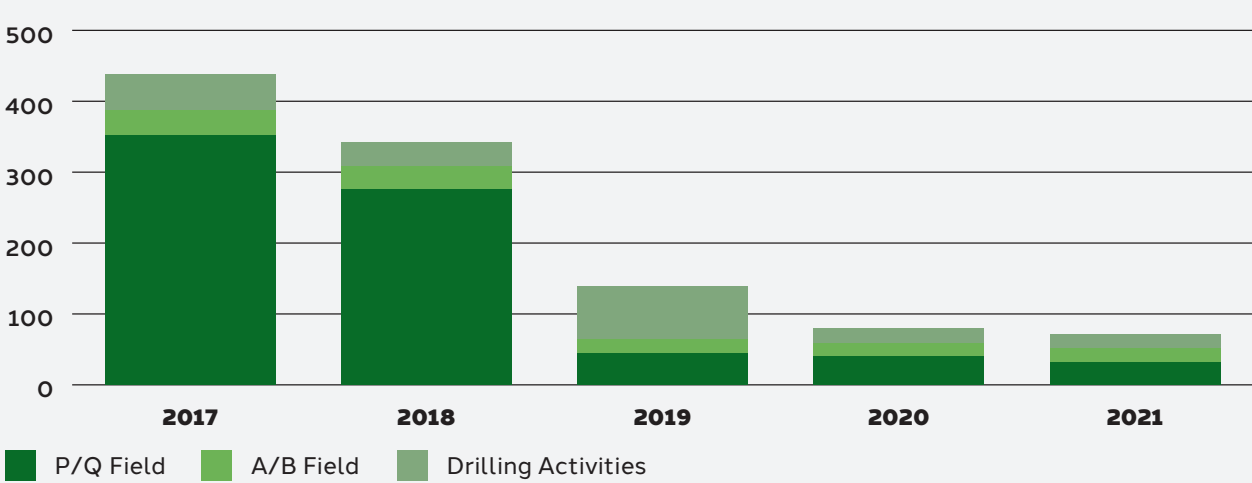


Figure 17 – Gross NO<sub>x</sub> Emissions

GROSS SO<sub>2</sub> EMISSION (TONNES)

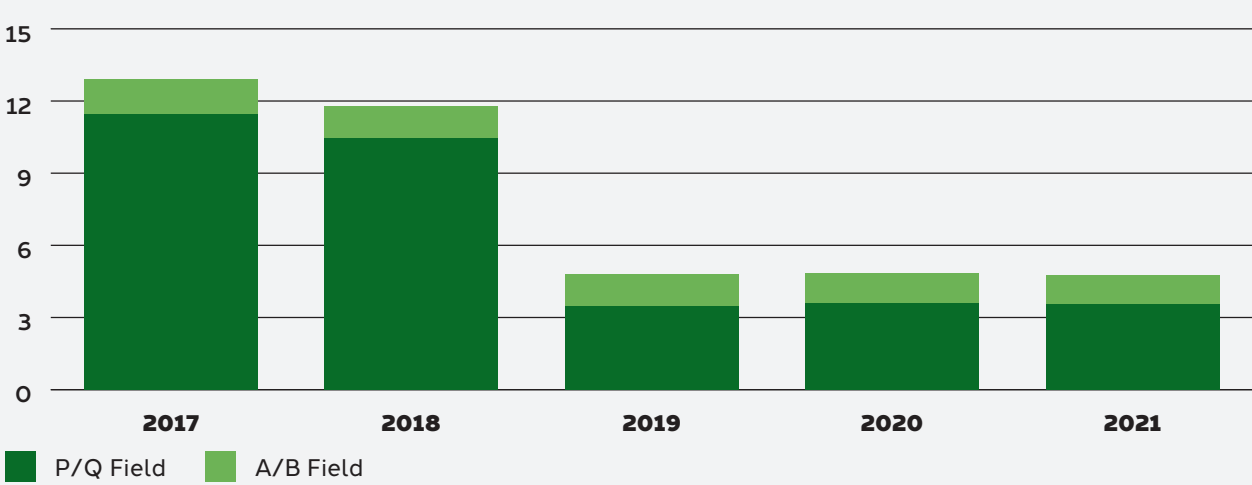


Figure 18 – SO<sub>2</sub> Emission

Location	Event	Quantity	Substance
Helder	Pinhole corrosion closed drain system	1-3 litres	Produced water, residual crude
Helm	Conductors cutting	10 litres	Residual crude, OBM, hydraulic oil
Helder	Well A4 plug and abandonment	< 60 litres	Formation water and residual oil
Horizon	Pinhole corrosion Wellhead Utility caisson	20 litres	Produced water, residual crude

Table 5 - Spills to sea of hydrocarbons



Rawan Al Habsi  
Environmental Trainee

“As an Environmental Trainee, I am interested in the energy transition landscape and even more so to be part of this transition with Petrogas E&P Netherlands, particularly as my home country, Oman, is very much still reliant on oil and gas. The lessons learnt at PEPN will set a great example on the importance of leading the energy sector to sustainability. Accounting for the indirect greenhouse gas emissions, that are not owned or controlled by the organization, and often overlooked, can open ample opportunities to reduce our carbon footprint and improve efficiency in our processes. I aspire to be the beacon of change for Oman and to help raise awareness on the impacts of carbon emissions not only to the oil and gas companies, but for the public knowledge.”



5.5 MATERIALS MANAGEMENT

5.5.1 Waste Streams

PEPN waste streams are collected offshore in various categories, then shipped onshore and disposed to appropriate locations. An overview of disposed waste is given below in Figure 19.

Waste streams vary from year to year based on the number of offshore project activities and the number of people stationed on the platforms. In 2021, the amount of waste increased to 2019 level due to increased level of activities after the effect of the COVID-19 pandemic in 2020; with upcoming construction and decommissioning activities it is expected that the amount of waste will increase, as we clean the platforms ahead of their removal and disposal.

As part of our Scope 3 emissions study, we are evaluating the emissions associated with waste disposal to further improve oversight in the waste chain and allowing us to effectively engage with Waste Management Contractors to maximise recycling or upcycling opportunities. Although the waste streams generated at the office are in volume not comparable with the ones offshore, in 2021 we introduced a waste recycling policy in Rijswijk. New separation bins with paper, PMC, Coffee Cups and General Waste were installed and the old bins removed to stimulate personnel to move from their desk and do the conscious effort to properly separate waste.



Figure 20 – Recycling Campaign Poster

At the end of 2021, we collected around 2800 kg of office waste; the waste majority is generic waste (~70%), followed by paper and ICT (see Figure 21). Of the waste collected, 29% was recycled and 71% transformed into energy.

5.5.2 NORM Waste

Naturally Occurring Radioactive Material (NORM) can be usually found as a result of Oil and Gas production; NORM normally accumulates inside vessels and it can be removed during routine cleaning operations. In 2021, an increased amount of NORM contaminated sludge was collected offshore and transported onshore for specialist disposal according to the legislative requirements:

It is expected that the quantities of NORM waste disposal will increase in 2022 & 2023 due to the decommissioning of the P/Q block facilities.

5.5.3 Use of Chemicals

The use and discharge of chemicals on offshore installations is regulated as per the Dutch Mining Regulations, which are in agreement with the OSPAR Convention. PEPN registers the use of OSPAR regulated substances and reports this on an annual basis to SSM. Before issuing the data to SSM, an external review is performed by CEFAS and a report is generated to analyse trends in usage and discharge of chemicals [20].

OSPAR chemicals are categorized in seven groups. A, B, C and D group substances being the most harmful to the environment. R, P and E substances being the least harmful. PEPN does not use A and B substances and over recent years, we have also phased out the use of C and D chemicals on our production platforms. Only for drilling projects, C and D substances might still be required, as contingency or in specific circumstances. However, PEPN restricted the quantity over the last 5 years.

GROSS WASTE STREAMS (KG)

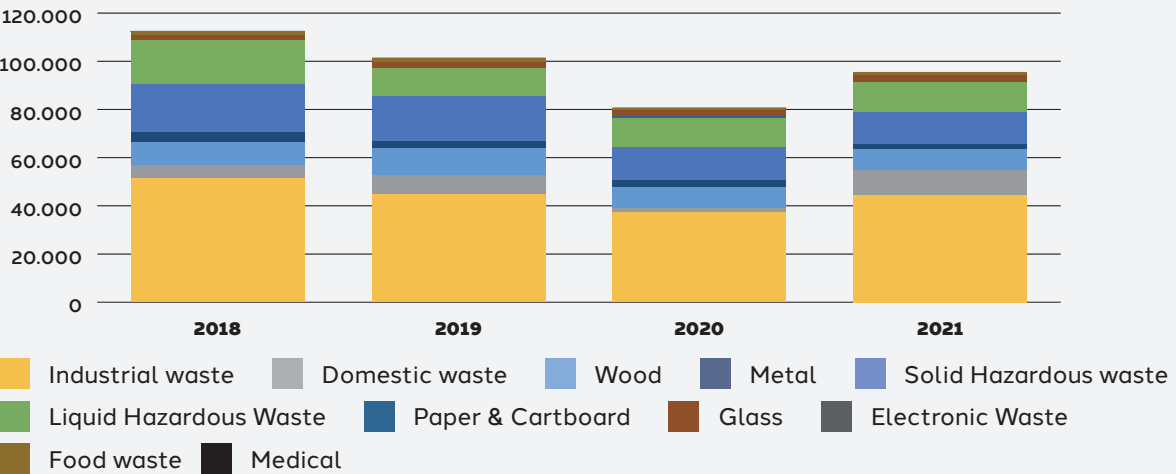


Figure 19 - PEPN Gross Waste Streams to Shore

OFFICE WASTE (%)

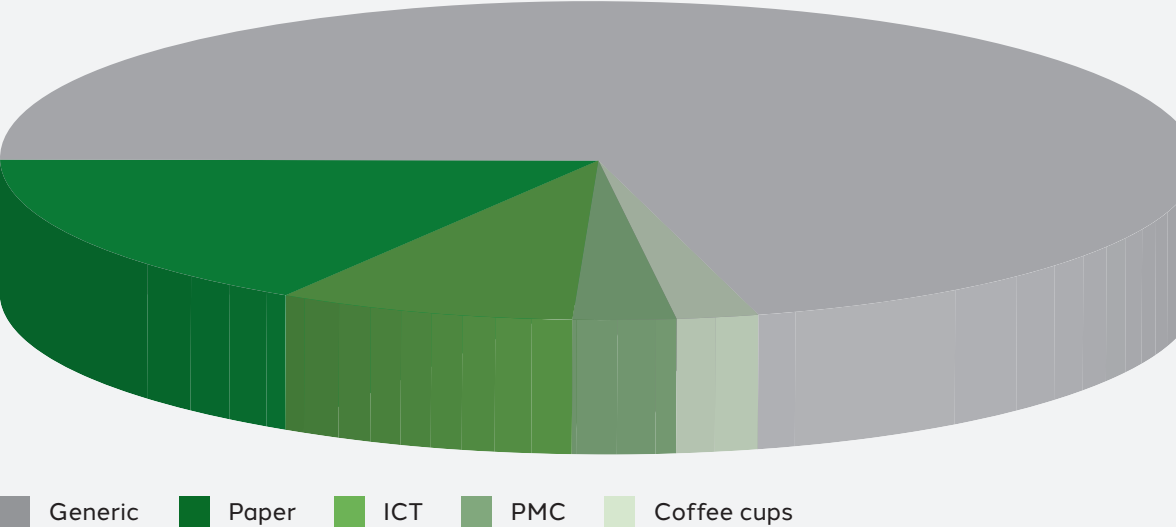


Figure 21 – Office Waste

WASTE (KG)

Location	2019	2020	2021
A12-CPP	12690	0	4320
B13	0	0	3340
Helder	0	0	101180
Helm	0	0	60800
Hoorn	0	0	0
Horizon	6890	4080	33980

Table 6 - NORM Waste Collection



Table 7 presents an overview of the reported used and discharged chemicals in the period 2017 to 2021.

Besides OSPAR regulated substances, PEPN also manages a Dangerous Goods List (DGL), which contains the chemicals and substances used on the platforms for regular activities, maintenance and small projects work. At the end of 2021, the DGL had an inventory of 298 chemicals (~5% more than 2020).

5.5.4 Recycling of Chemicals

Synthetic Oil Based Mud (SOBM) is selectively used during drilling activities and all SOBM is recovered for reuse; associated cuttings are recovered into containers transported onshore for final treatment.

5.6 DECOMMISSIONING

In 2021, PEPN took the decision to stop Oil production by Q2, 2022 and decided to accelerate the decommissioning plans of its platforms in Q1 and P9 blocks. The platforms in this cluster were installed in the 80’s and 90’s and the installations have reached the end of their life. The decommissioning activities completed in the last four years are summarised in Table 8.

Table 9 (on page 64) shows an overview the current decommissioning plan and provisional schedule.

The Halfweg gas platform was removed (both topside and jacket) in January 2019. A vessel allision with the platform led to a fast-track removal project. The platform was installed with a Gravity Based Structure (GBS) on the seabed. This concrete structure is currently still on the seabed. It could not be removed with the jacket and topsides due to the damage from the allision.

The Helm and Hoorn platforms have been in idle mode since 2016, and Helm was brought into Lighthouse in 2021, with the additional installation of solar panels to provide power for navigational aids and obstruction lights.

Six wells on Helder were plugged and abandoned using PEPN’s workover basket, starting in Q3 2021, using the available power and infrastructure on the facility. This efficient use of resources significantly decreased the carbon footprint of the operation compared to the conventional approach of using a drilling rig to P&A wells after the platform has ceased production.

Haven, Helder, Hoorn and Horizon will all be transformed to Lighthouse Mode in 2022: platforms will be cleaned and where possible, hazardous materials are removed. Residual material which cannot be safely removed from the platforms will be stored in secure tanks whilst living quarters, helidecks and other ancillary equipment will be put out of service. Solar panels will be installed to power the navigational aids and obstruction lights as per ICAO and IMO/SOLAS requirements.

Phase 2 of Helder’s wells P&A will be completed where possible with the PEPN workbasket while Hoorn and Haven wells will be P&A’d with a rig. A Rig is in the process of being contracted to support the P&A activities on Hoorn and Haven in 2022. Back-pressure valves will be installed on Horizon’s wells in June 2022 and P&A, will be executed in 2023 or 2024.

In 2021, a contract with Heerema Marine Contractors was executed for the removal and disposal of Helm, Haven, Helder and Hoorn. Horizon is planned to be added within the scope of the same contract in 2022. The scope of work is expected to be executed between 2023 and 2027; the first platforms scheduled to be removed are Haven and Hoorn in 2023.

PEPN is also participating in the Nexstep joint Mud Line Suspension well campaign to plug and abandon stand-alone exploration wells in the Dutch Continental Shelf; a total of 3 PEPN wells will be decommissioned in 2023 with a dedicated vessel.

	2017	2018	2019	2020	2021
Used offshore					
A, B	0 kg	0 kg	0 kg	0 kg	0 kg
C, D	5.486 kg (0.4%)	2.325 kg (0.3%)	17.330 kg (0.8%)	1.757 kg (0.3%)	4492 kg (0.5%)
R, P, E	1.309.207 kg (99.6%)	807.536 kg (99.7%)	2.074.757 kg (99.2%)	666.687 kg (99.7%)	917.681 kg (99.5%)
Discharged offshore					
A, B	0 kg	0 kg	0 kg	0 kg	0 kg
C, D	0 kg (0.0%)	23 kg (0.01%)	57 kg (0.01%)	0 kg (0.0%)	0 kg (0.0%)
R, P, E	245.158 kg	245.270 kg	1.134.872 kg	135.779 kg	159.070 kg

Table 7 - Gross use and discharge of OSPAR regulated substances

Platform	Activity	Year
Halfweg	Wells Plugged and Abandoned	2017
Halfweg	Topside Removal and disposal	2018-2019
Helm	Wells Plugged and Abandoned	2017-2018
Pipelines	Halfweg-Hoorn depressurisation	2019
Helm	Well conductors cut and platform left in Lighthouse mode	2021
Helder	Phase 1 of wells P&A	2021

Table 8 – Last period Decommissioning Activities



Platform	Current Status (end 2021)	Decommissioning Activities	Planning
Halfweg	Platform removed	Removal of Gravity Based Structure (GBS) on Seabed	Pending decision on area of ecological interest
Helm	Lighthouse	Removal of topside and jacket	2023-2027
Hoorn	Idle – used for transportation of gas to Helder	Plug & abandon (P&A) wells	2022
		Convert to Lighthouse Mode	2022
		Removal of topside and jacket	2023
Helder	In production	Cessation Of Production (COP)	Q2-2022
		Phase 2 of wells P&A	Q2/Q3 2022
		Convert to Lighthouse Mode	Q3-Q4 2022
		Removal of topside and jacket	2023-2027
Haven	In production	Cessation Of Production (COP)	Q2-2022
		Plug & abandon (P&A) wells	Q3-2022
		Convert to Lighthouse Mode	Q2-2022
		Removal of topside and jacket	2023
Horizon	In production	Cessation Of Production (COP)	Q2-2022
		BPV installation	Q2-2022
		Plug & abandon (P&A) wells	2023
		Convert to Lighthouse Mode	Q3/Q4-2022
		Removal of topside and jacket	2022-2027
Q1 / P9 non platform wells	Exploration wells suspended	Removal of exploration wells in	2022-2023
WGT – Hoorn Pipeline	Idle	Depressurisation and cleaning	2022
Hoorn – Helder pipeline	In production	Depressurisation and cleaning	2022
Haven – Helder pipeline	In production	Depressurisation and cleaning	2022
Halfweg – Hoorn Pipeline	Idle	-	-
Horizon – Helder Pipeline	In production	Depressurisation and cleaning	2022
Helder – Terminal pipeline	In production	Depressurisation and cleaning	2022

Table 9 – Decommissioning Plan



# SAFETY, HEALTH AND SECURITY

3 GOOD HEALTH  
AND WELL-BEING



8 DECENT WORK AND  
ECONOMIC GROWTH



PEPN has a mature ISO 45001:2018 certified management system; its Health, Safety and Environment (HSE) Policy and Major Accident Prevention Policy underpin the PEPN Vision, Mission and Core Values. Several BEMS processes and sub-processes are defined with the operational, tactical and strategic objectives to prevent and mitigate health and safety factors to the workforce. These include Occupational Hygiene, Health and Wellbeing, Emergency Management, Training and Competence, Managing Safe Work and Contractors Management. A Process Safety Management philosophy is also established to bring together the three defined pillars of Engineering Integrity, Facility Integrity and Operational Integrity, to ensure that hazardous fluids are contained within their primary containment.

Due to the core business of PEPN being offshore, the health and safety impact of our activities to onshore local communities is considered minimal, if not negligible.

## 6.1 WORKFORCE ENGAGEMENT

PEPN encourages, at all levels, to report problems related to the day-to-day activities and to offer suggestions on how to improve PEPN performances, with particular attention to the health and safety aspects. The consultation and participation of workers / employees at all applicable levels in the organization related to PEPN BEMS is ensured by various mechanisms and systems. The participation and consultation mechanisms are characterised in detail in the Consultation, Participation and Communication Register.

Taking into consideration COVID-19 restrictions, in September / October we were able to organise two Crew Conferences to provide the opportunity for the onshore and offshore teams to discuss safety topics, Company performance, business development and for team bonding. The main theme of the 2021 Crew Conference was about the journey from Safety I to Safety II, discussing a more

encompassing understanding of safety and a change in accountability models.

One of the positive aspects of COVID-19 was that it forced us to change our ways of communicating, therefore, in order to overcome the travel restrictions, routine online meetings between the various teams were established. Notably, the Operations Department implemented biweekly “Zoom calls” to address any operational topic giving the possibility to everyone to share information with an inherent wider audience; guest speakers from other departments were invited to share topic of interest for the offshore workforce.

### 6.1.1 Work Council

A Work Council (WC) is established and active within PEPN; the WC is composed by 7 persons: 1 Chairman, 3 offshore personnel representatives and 3 onshore personnel representatives. The WC meets with the General Manager and HR Manager every quarter to address any concern of the workforce. The WC is also involved in the review and approval of Company Policies, the Risk Inventories and Evaluations and the Report on Major Hazards.

### 6.1.2 Townhalls

Townhall meetings are regularly organised by the PEPN Management Team to update both the onshore and offshore workforce about the current status of Company affairs: from the latest HSE focus items and lesson learnt to the newest business developments.

In 2021, due to the COVID-19 crisis, we continued to have online Townhall meetings with the possibility of interaction and questions for both the onshore and offshore workforce. This provided to all the members of PEPN community with the opportunity to improve their awareness on the Company affairs, ask questions to management and provide their views on the Company business. The Company enabled to have these questions to be sent also anonymously.



### 6.1.3 Participation

PEPN seeks to create and maintain a Company Culture in which all employees share positive commitment to HSE by:

- Encouraging HSE focused campaigns and themes, and welcomes employee constructive suggestions for improving HSE performance (e.g. Suggestion Box);
- Promoting a positive attitude towards HSE principles (e.g. SMART cards);
- Making everyone in PEPN responsible and accountable for their own actions (e.g. Stop Work Authority, Life Saving Rules).

PEPN seeks to promote a positive Culture throughout the execution of its core activities. Culture is an emergent property of an organisation; Culture is emerging from every single worker within the context of the whole organisation, therefore, a positive attitude of the BELT and other Managers and Supervisors on site can have a very influential effect in demonstrating the importance of health, safety, integrity and protection of the environment to the workforce. Leadership Engagements are tracked to encourage PEPN leaders to engage with PEPN Workforce and Contractors. PEPN positively recognises efforts of all personnel to maintain and strengthen our major accident defences, and relevant individuals are nominated for local award programmes. A reward system (e.g. “vouchers” given to the “best card of the week”) is put in place to recognise positive safe and environmentally sound behaviour during operational activities (drilling).

Participation	2020	2021
Leadership Engagements	65	92
Hazard Hunts completed	43	45
Life Saving Rules roll-out	3	6

Leadership engagements continued in 2021 despite the limitations required to prevent COVID-19 outbreaks.

### 6.1.4 Special Recognition Awards

Within PEPN, a Special Recognition Award program is in place to reward personnel for outstanding contributions to the business success which, in view of Safety II philosophy, correlates with “HSE success”. In 2021, 58 employees and 11 contractors were rewarded for their contribution to the improvement of the Company in all aspects.

### 6.1.5 Suggestion Box Awards

All the proposals submitted to the Suggestion Box are examined by a special workgroup formed by members of the PEPN workforce and selected for their merits. Once the proposals are initially vetted, those are submitted to the BELT for review and approval. In 2021, based on the suggestions raised, the recycling bins were installed and an associated awareness campaign was launched (refer to section 5.5.1), and it was decided to provide power columns to charge electrical cars or scooters to motivate personnel towards more sustainable transport. These will be installed in 2022.

### 6.1.6 Prevention Officers

PEPN recognises the value of a healthy workforce (physically and mentally). To support this, there are two dedicated Prevention Officers within PEPN to provide additional help in advising health and safety prevention measures. Both Prevention Officers are part of the HSEQ Department allowing a more encompassing approach to health and safety aspects.

In 2021, the Petrogas Prevention Platform was developed and launched; this platform provides the PEPN workforce with a hub where all the important health and wellbeing information can be consulted.



Figure 22 - Petrogas Prevention Platform

### 6.1.7 Contractor Management

Engagement of our contractors is another key element of a robust health and safety management system; our contractors participate in a substantial percentage of the special construction, maintenance and inspection activities, which we conduct on a yearly basis. As part of our Contractor Management process, we identify high risk contractors based on HSE, ESG and business criteria and routinely engage with them either via informal / formal meetings and / or via dedicated HSE audits. As members of NOGEPa and the SNS Pool, we also participate in industry driven initiatives to ensure we build and maintain a competent pool of contractors. In 2021, due to pandemic constraints, the number of initiatives was still limited, but we were able to engage our contractors in plenary sessions before

starting our maintenance campaign on the A/B Block (August 2021) and drilling operations on the P9 Horizon A9 Well (May 2021).

Contractors Engagements	2019	2020	2021
Contractor Audits	5	8	4
Contractors Plenary Sessions	2	3	1

### 6.1.8 NOGEPa

PEPN is an active member of NOGEPa, participating to various established committees and workgroups; by contributing and participating to these groups, we can address industry wide-issues and find common approaches on how to tackle potential threats to the health and safety of personnel or the public. PEPN supported NOGEPa with the implementation of the new HSE online learning initiative [18]; this is to provide free access to a standard level of HSE training, to all service companies supporting the Oil and Gas sector.

### 6.1.9 Training

PEPN ensures a trained and competent workforce, as this is essential to protect the health and safety of personnel and the environment, while operating its offshore upstream platforms in the North Sea. Therefore, staff and long-term contractors, based on their specific role assigned, go through a routine of safety and technical training.

Delivered Training	2019	2020	2021
NOGEPa	297	27	287
NORM	2	0	26
MAP	25	12	0
Scaffolding	0	0	20
Offshore Emergency Drills	127	141	171
Office Emergency Drills	2	1	9



Liliane Spier  
H&WB Advisor

“Good mental health is fundamental to overall Health and Wellbeing. The Covid-19 Pandemic and remote work challenges underscored the importance of this even more. That’s why Health & Wellbeing should be recognized and embedded as a cultural priority in every organization and will lead to improved performance in a sustainable synergy of well-being and productivity. It will remain important to raise awareness and continue to promote activities in the field of Health and Wellbeing. Particularly for those whose harmony is temporary out of balance. Prevention is better than cure!”



In 2021 we increased the number of emergency drills offshore and onshore to improve proficiency in emergency and crisis management. The whole Emergency Management Team and Crisis Management Team received additional training to enhance understanding and effectiveness.

6.2 WORKFORCE PROTECTION

PEPN has a comprehensive Occupational Hygiene and Health and Wellbeing program; the two programs are complementary, therefore in 2021, to improve effectiveness, we moved the Health and Wellbeing process within the HSEQ Process.

6.2.1 Pandemic Management

In 2021, PEPN continued to manage the COVID-19 pandemic through the series of openings and lockdowns imposed by the local authorities. PEPN consciously chose to stay on the conservative side and maximised the “pandemic” working from home policy for onshore personnel and adopted stringent protocols for the offshore personnel. The Company strongly supported the government advice and encouraged, as appropriately, its workforce to get vaccinated.

A complete tally of persons who caught the COVID-19 virus is not available due to restriction on privacy. However, in agreement with State Supervision of the Mines, PEPN tracked how many Category C persons (i.e. persons highly suspected to have the virus) were evacuated from our offshore installations. In total, in 2021, we evacuated 11 persons with symptoms of COVID-19. Despite the challenges, no actual COVID hotspots occurred, which would have required the shut-in of a facility and the subsequent evacuation of all personnel.

6.2.2 Health and Well Being Initiatives

A part of the Health and Well Being process, several initiatives are taken to prevent and mitigate health issues to the workforce. In addition to the regulatory requirements (e.g. Working Conditions Act, Decree and Regulations) and Company standards (e.g. Human Factor Engineering Philosophy), PEPN supports a Health and Well Being program to further enhance its employee’s wellbeing. Additional support is provided by the Company Doctor on an as needed basis. Both in 2020 and in 2021, H&WB activities have been restricted and modified to take into account pandemic restrictions.

H&WB Initiatives	2019	2020	2021
Medical examinations <sup>5</sup>	30	32	
Flu shot days	1	1	1
Health check-up days	3	3	3
Outdoor fitness breaks	24	-	-
Remote stretching sessions	-	3	-
Muscular strain prevention sessions	24	4	3
Workstation Evaluation	-	-	26
Outdoor fitness breaks	-	-	4
Remote stretching sessions	12	6	11

<sup>5</sup> H&WB activities have been restricted due to COVID-19

6.2.3 Legionella Prevention

As mentioned in Section 5.1.1, PEPN has a comprehensive Potable Water Management system; as per design, in 2021 we operated 3 facilities with bunkered water (Helder, Helm and Hoorn) and 4 facilities with water produced via dedicated Reverse Osmosis (RO) units (A12-CPP, B13, A18 and Horizon). Chemical-physical means are applied to keep the quality of water within the legal limits. Although, on average, the quality of water is within parameters, there were 6 sampling results, which exceeded allowed limits (4 on Hoorn and 2 on Helder). On those occasions, as advised by our independent potable water advisor (i.e. Normec-Kalsbeek B.V.), a contingency plan was applied to bring the quality back to its required standards as mentioned in the Dutch legislation (Drinkwater-besluit). It is expected that the issue with Legionella will disappear once the Hoorn and Helder platforms are transferred into Lighthouse Mode.

6.2.4 Naturally Occurring Radioactive Material

All fields operated by PEPN are under a NORM license, and PEPN regularly measures the radiation levels on the platforms. The result of measurements depends on the particular tool used, but in general and on average the background radiation on the platform is below 0.1 uSv/h against the onshore average which is 0.18 uSv/h [17]. Personnel directly involved with NORM handling are trained as per the relevant NOGEPa Industry standards.

On average, the P/Q fields have higher measured NORM than that measured at the A/B fields. The predominant nuclides measured are Radium-228 and Lead-210.

6.2.5 Substances of High Concern

PEPN has a control procedure in place to prevent and mitigate exposure to substances of high concern, which might have an impact to the health of personnel. These can include Mercury (as found in sludge), Chromium VI (as found in paints or result of welding and cutting) and / or Asbestos (although rarely found, the material could be around in older facilities), BTEX and production chemicals in general. Potential long-term exposure is monitored via biological sampling, as coordinated by our independent health service provider.

As per Working Condition legislation and in consultation with our Company Doctor, in Q4 2021 we conducted a periodical biological investigation on exposure (a.k.a. PAGO) to Benzene and Mercury; the investigation was actually completed in January 2022 and the results shown in March 2022. 21 persons participated in the analysis and the results did not show any particular area of concern; as recommended by the Company Doctor, the campaign will be repeated in 2026.

Year	Haven	Horizon	Helder	Hoorn	Helm	A12	A18	B13
2019	8 CPS	7 – 8 CPS	7 – 8 CPS	9 CPS	7 CPS	25 CPM	7.8 CPS	7.8 CPS
2020	N/A	7 – 8 CPS	7 CPS	9 CPS	N/A	7 – 8 CPS	6 CPS	18 CPM
2021	N/A	17-18 CPS	9-10 CPS	12-13 CPS	N/A	7 CPS	N/A	N/A

Table 10 – Average NORM measurements



6.2.6 Safety Campaigns

Safety Campaigns are a tool used in the industry to provide additional insight on a particular topic and create appropriate attention. Campaigns are either proactive, intended to inform about new safety aspects, or reactive, launched after an event. In 2021, PEPN launched a campaign on Fatigue Management highlighting the effect of tiredness on physical and mental health. During this campaign the link between fatigue and process safety risk was demonstrated.

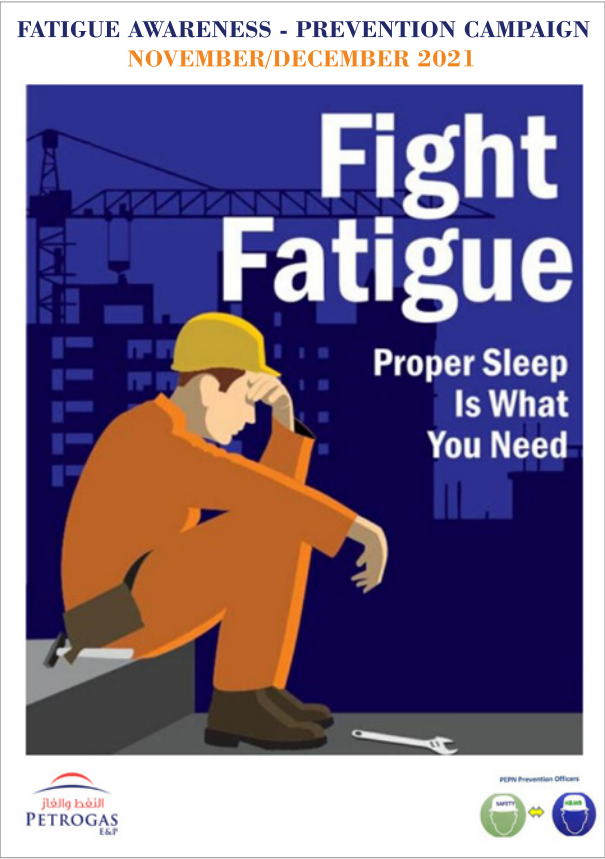


Figure 23 – Fatigue Awareness Campaign Poster

6.3 OCCUPATIONAL SAFETY

In 2021, we continued our journey into Safety II aspects implementation; Safety II is a more encompassing way to address safety, where a safe working environment is not per se defined by the lack of incident and accidents, but by the presence of resilient safeguards and workforce. One of the foci, for instance, is ensuring that the workforce, the “Sharp End”, is more and more involved in shaping a

safe working environment and not be just passive receivers of instructions and procedures; in this spirit the offshore workforce was the first part of the organisation to be engaged with the concepts during the two 2021 crew conferences. During these two conferences specific attention was given on understanding the difference between Work as Intended (e.g. the procedures normally written by the technical personnel at the office) and Work as Done (e.g. our in reality things are executed in the field) and how to reduce the gap between the two. While in pursuit of enhancing our approach on occupational (and process) safety, we continue to record, report, investigate and learn from accidents, incidents and near misses, as per current industry standards.

Occupational Safety Indicators	2019	2020	2021
LTIF	0	2.46	0
TCRF	4.50	4.25	4.05
Fatalities	0	0	0
Fatality rate	0.00	0.00	0.00
RTAF	0.00	0.00	0.00

The Lost Time Injury Frequency Rate (LTIF) and Total Recordable Cases Frequency (TRCF) are calculated on one (1) million working hours. The Road Traffic Accident Frequency is evaluated based on one (1) millions of kilometres.

With respect to 2020, in 2021, thanks to better management of COVID-19 pandemic constraints, PEPN could increase the number of working hours by around 22%. Figures include both PEPN employees and contractors.

In 2021, with the addition of the UDS3 drilling campaign, the use of helicopters to transport personnel from and to Den Helder Airport to and

from its installations or the rig increased. In total, 625 flight hours were recorded. No incidents with HSE consequences were recorded.

With respect to Supply Vessels, PEPN completed 311 full sailing days and around 4600 vessel cargo lifts (loading and unloading). There is no estimate of ‘in-platform’ lifts. No incidents with HSE consequences were recorded with these activities but a near miss with potential serious consequences was recorded on the Helder Platform during P&A activities .

For completeness of information, the events classified as aviation and marine incidents did not result in injuries to personnel, but had a low potential for it.

Other Occupational Safety Indicators	2019	2020	2021
First Aid Cases	8	3	5
Non-Work Related events	8	14	13
Aviation Incidents	0	2	0
Marine Incidents	0	1	1
Safety Zones Intrusions	1	3	0
Level 1 investigations executed in time	100%	97%	100%
Level 2 investigations executed in time	100%	90%	70%
Level 3 investigations executed in time	100%	100%	100%
Improvement Action Raised	81	75	22

HISTORICAL SAFETY EVENTS (VS TRCF)

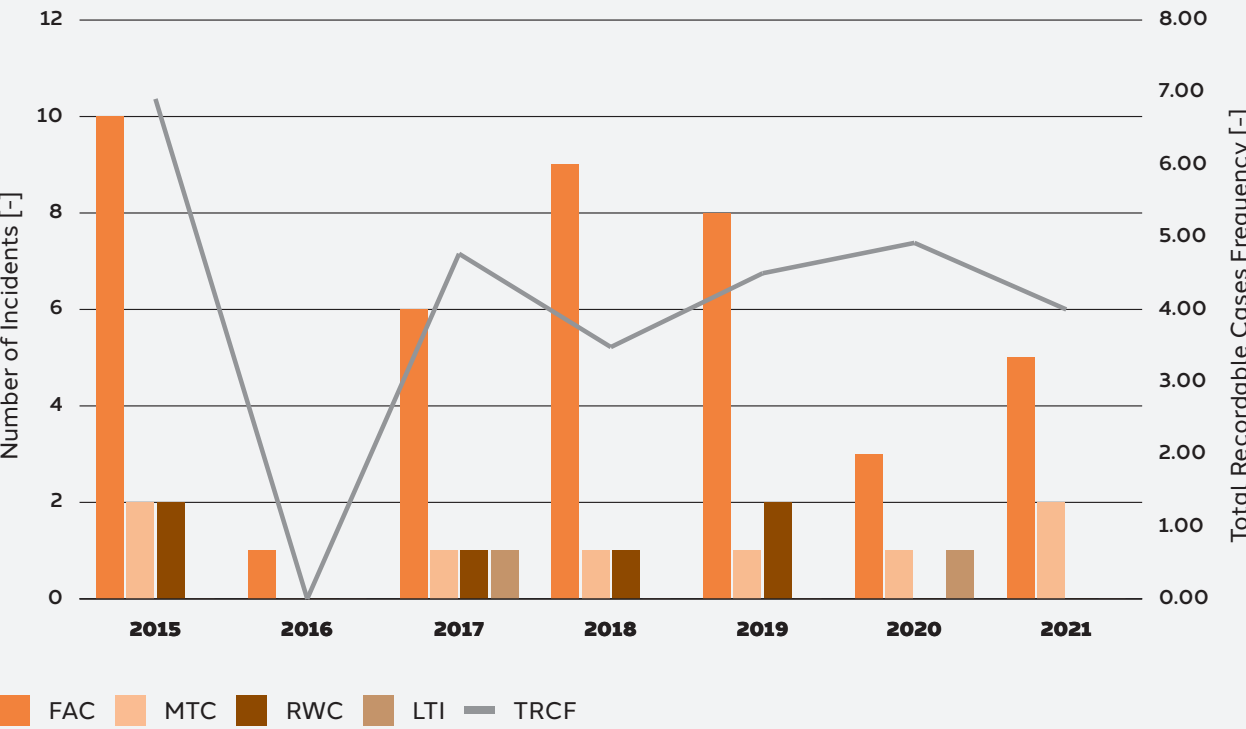


Figure 24 - Historical Gross Safety Events Trends



6.4 PROCESS SAFETY

The PEPN Process Safety Management is an integrated and disciplined framework for managing the integrity of the systems and processes to prevent and mitigate major accident events. By managing its Engineering Integrity, Facility Integrity and Operations Integrity, PEPN ensures handling of hazardous fluids to prevent and mitigate these events.



Figure 25 – Process Safety Management Campaign Logo

The identified “integrity” are a way to depict the existing PEPN BEMS processes and subprocesses around their focus areas, but, in general, there is no rigid separation among them; further, there is no direct link between the “integrity” and the various PEPN technical departments. By managing Process Safety, PEPN ensures a consistent overlap with Occupational Safety and Environmental Protection. PEPN ensures “integrity” are managed by a competent workforce, fit for purpose organization,

operating within a robust Company Culture. Losses of containment and near misses are used as a lagging indicator for Process Safety.

Loss of Containments	2019	2020	2021
Gas Releases - Negligible	0	1	1
Gas Releases - Significant	0	0	0
Gas Releases - Major	0	0	0
LOC to sea - Minor	2	0	3
LOC to sea - Major	0	0	1
Potential for Fire/ Explosion	4	3	1
Potential for Gas Release	0	0	0

PEPN classified the “size” of a loss of containment, as per the requirements of the NOGEPa Industry Standard 86 [21]. The 2021 gas release was negligible in nature and caused by the technical failure of a connecting line to a gas engine manifold, located on the Helder Platform. Two of the spills to sea were related to decommissioning activities, one minor during conductor cutting, one major during well P&A activity. This latter release (~60 kg of hydrocarbons estimated) was classified as Tier 2 Process Safety Event as per API RP 754 [20]. There were two further minor releases due to integrity issues in the draining system at the Helder Platform. A historical overview of all environmental events with process safety potentials is depicted in Figure 26.

Other leading indicators, such as high priority alarms, are monitored and shared within the Company; the goal of 2021 onwards is to centralise the outlook of data and make them more visible to the organisation via a dashboard.

In 2021, we launched a video as a kick start for our Process Safety campaign (see Figure 25); the video focused on the communication aspects of management of change and the challenges between offshore and onshore.

6.5 SECURITY

Due to location of PEPN offshore facilities and pipelines, physical security has a low materiality for us; however, security threats are not ignored and processes are in place to prevent and mitigate security consequences. Management programs are in place to monitor security and possible threats. The pipeline is routinely inspected by Pipeline Control B.V., while the Office is guarded by Securitas B.V. In 2021, no security related events have been recorded.

6.5.1 Cybersecurity

Critical cloud systems within PEPN are hosted at

ISO 27001 certified data centres and process safety equipment (e.g. PLC, etc.) are air-gapped to prevent external intrusions via internet; a protocol is in place to prevent uploading of unwanted or unchecked updates in the safety controls. The PEPN IT department is engaged to ensure everyone working within the PEPN network is well aware about the risks of opening suspected e-mails, phishing activities and other social engineering security threats. PEPN internal IT policies and protocols are in line with ISO, ITIL and COBIT requirements.

6.5.2 GDPR

Within PEPN an interdepartmental workgroup led by the Data Protection Officer (Legal Counsel) is established to provide guidance on the requirements of privacy protection as per the GDPR requirements.

In 2021, no violation of GDPR rules were recorded.

HISTORICAL ENVIRONMENTAL EVENTS

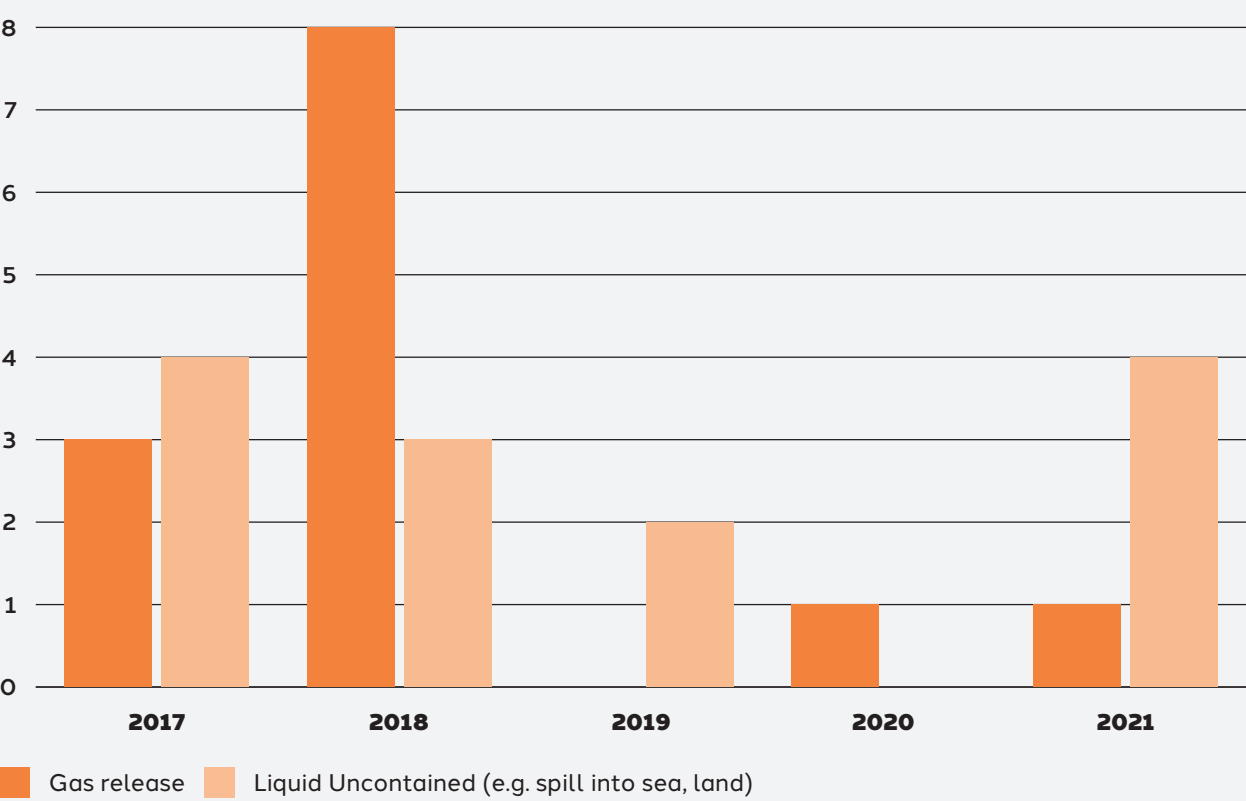


Figure 26 - Gross Environmental Events



# SOCIAL

Due to the nature of our operations, the impact of PEPN to the local community is indirect. Although, through our workforce, contractors and service providers, our investment has a significant impact on the economy, particularly in the area of our office and supply base locations as well as through the rest of the Netherlands.

PEPN operates in the Netherlands and the Dutch Continental Shelf making use for the vast majority of Dutch Vendors and Suppliers. Only a tiny percentage (< 1%) of our Supply chain transcends the borders of continental Europe; by the nature of PEPN business, the risks of dealing with Companies infringing Human Rights is considered low, however, firm commitment to respect Human Rights is included in our Contracts Terms and Conditions. Other ESG aspects will also be integral part of engagements with our high risk and key Vendors.

## 7.1 HUMAN RIGHTS

Regardless the low materiality of Human Rights, PEPN has policies against Human Rights infringements, Modern day Slavery and Child Labour. Grievance and Whistle-blower policies and procedures are in place.

Aside the PEPN Business Ethics, PEPN has a “Stop Work Authority” policy, which clearly stipulates that undesired behaviour, such as, but not limited to, harassment, discrimination or bullying, is not acceptable.

## 7.2 LABOUR PRACTICES

PEPN employees (121) are predominantly recruited in the local market; at the end of 2021, 85% of the PEPN employees are Dutch nationals, while the rest of the workforce (15%) is coming from 10 different countries. The gender distribution of the PEPN employees (Figure 28) is slightly above the oil and gas offshore industry [23], but well below the Dutch average [24]; PEPN recognises and applies a forward-looking policy with respect to “Diversity and Inclusion”, which adds value through balanced decision making, safety and ethically driven decisions.

Complimenting the employees, PEPN makes significant use of contractors; they are sourced either by agencies or single persons entities. Other Contractors are hired to perform jobs as part of other short-term services (e.g. consultancy, inspections, operational activities), primarily from the Dutch labour market.

## SUPPLY CHAIN

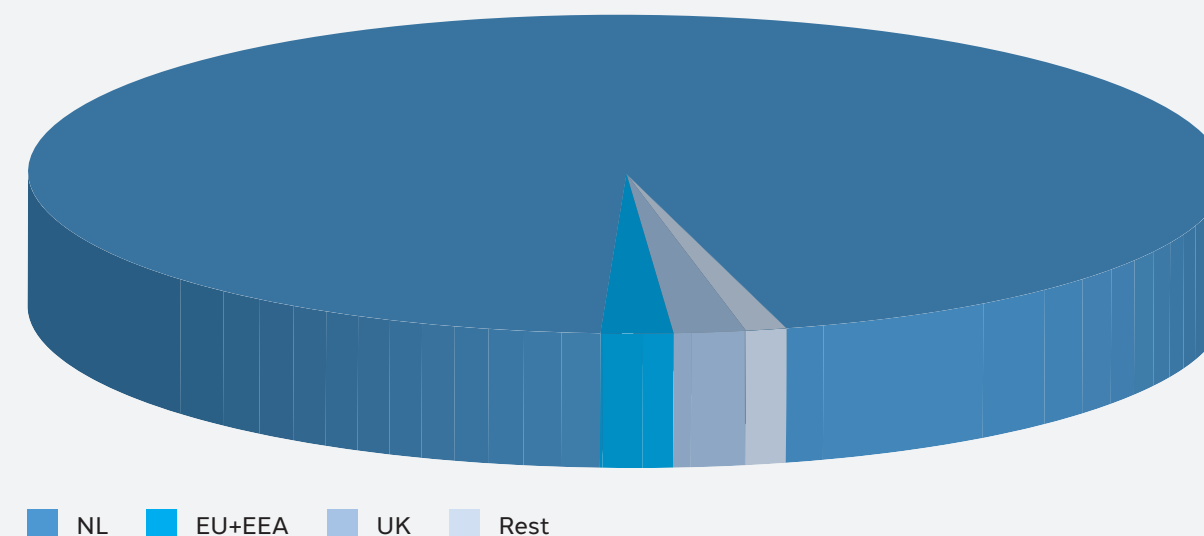


Figure 27 - Supply Chain Vendors Distribution





PEPN, as a technical organisation, has a large percentage of highly qualified skilled employees, with average salaries benchmarked against similar technical companies in the Netherlands. Positively, the ratio between the highest and the average salary in 2021 was 3.5.

PEPN personnel are free to associate, to join and form trade unions.

PEPN does not tolerate discrimination by gender, age, ethnic or faith when recruiting and employing personnel. Personnel has free access to the prayer room at the office in Rijswijk.

Our offshore Personnel, during their 2-week offshore shift, are provided with accommodation, as per Dutch laws and regulations, with quality food, water and sanitation, creating a comfortable living environment.

The PEPN Human Resource Department is tasked with the responsibilities to ensure compliance to employment rules and regulations.

7.2.1 Contractor Management

PEPN has a Contractor Management process to ensure contractors apply our policies, procedures, and practices during the execution of the scope of work. For each Key and Important Contractor, Contract Owners are assigned to ensure the open and regular communication, re-enforcing the relevant policies and procedure requirements are followed. Based on a risk assessment, Key Contractors are audited and findings and opportunities of improvement are shared with the contractor. As part of NOGEPA, PEPN participates in Joint Contractor Audit Workgroup to pool the various Operators resources together and share findings with a broader community; details about number of audits are given in *Section 3.2.2*.

Contractors	2020	2021
Key Contractors	34	27
Important Contractors	25	25

PEPN is part of SNS Pool Steering Committee, SNS Pool Safety Committee and Aviation Steering Committee where marine and aviation practices and incidents are shared amongst the participants for continuous learning and improvement.

7.3 COMMUNITY ENGAGEMENT

Besides business engagements with the various Ministries and Associations, we strive to make a positive impact to the society at large, not only trying to minimise our footprint and provide clean and affordable gas to the community, but contributing to local charities through Company sponsored activities (e.g. PEPN Charity Golf Tournament) or through Connect. After the break in 2020, due to the COVID-19 constraints, in September 2021, we were able to organise the PEPN Charity Golf Tournament, where we collected 29,000 Euro, which Petrogas pledged to double; the total amount of 58,000 Euro was donated (paid out in March 2022) to the [Dutch Red Cross](#), to the [KNRM](#) and [Stichting Alzheimer Nederland](#).



Connect is our employee’s engagement group that enables interactions among departments via social and cultural events. Through various initiatives, like the virtual walk from Rijswijk (PEPN Office) to Muscat (Petrogas Corporate Office), the Connect Team together with PEPN workforce managed to collect and distribute around 10,000 Euro to [MS Motion](#), [ALS](#), [Hersenstichting](#), [Ronald McDonalds Huis Den Haag](#), [Stichting Vrienden van het Sophia Kinderziekenhuis](#) and [KWF - Koningin Wilhelmina Fonds](#).

WORKFORCE COMPOSITION

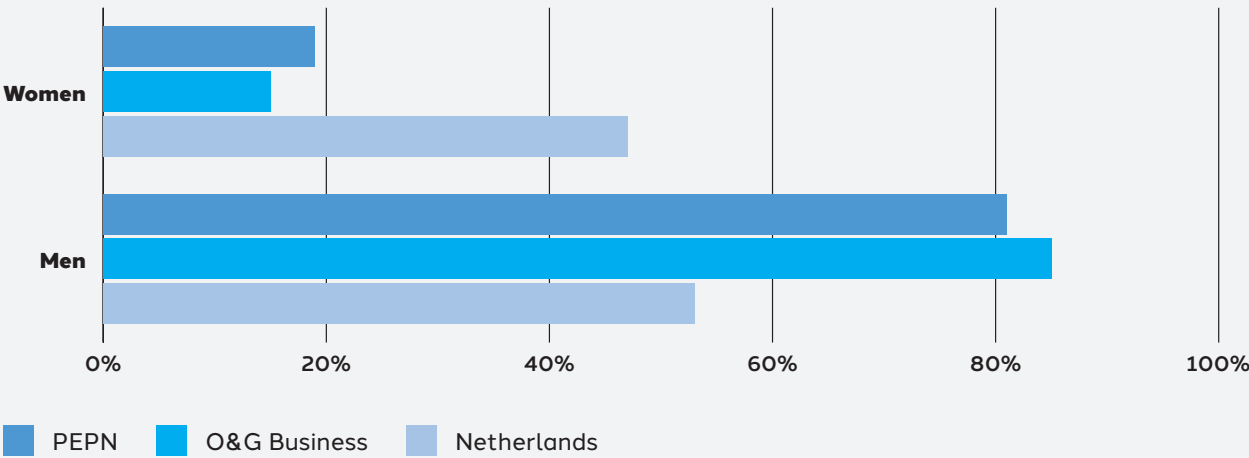


Figure 28 - Gender Distribution







# APPENDICES

## ABBREVIATIONS

<b>A&amp;F</b>	Accounting and Finance
<b>ABEX</b>	Abandonment Expenditure
<b>AOC</b>	Agreement of Cooperation
<b>BELT</b>	Business Excellence Leadership Team
<b>BEMS</b>	Business Excellence Management System
<b>BPV</b>	Back Pressure Valve
<b>BROA</b>	Business Risks and Opportunities Assessment
<b>BTEX</b>	Benzene, Toluene, Ethylbenzene and Xylene
<b>CAPEX</b>	Capital Expenditures
<b>CCO</b>	Chief Commercial Officer
<b>CEO</b>	Chief Executive Officer
<b>CIPS</b>	Chartered Institute of Procurement & Supply
<b>CIT</b>	Corporate Income Tax
<b>CCS</b>	Carbon Capture and Storage
<b>COBIT</b>	Control Objectives for Information and Related Technology
<b>COP</b>	Cessation of Production
<b>COVID-19</b>	Corona Virus Disease 2019
<b>CPP</b>	Central Processing Platform
<b>DCS</b>	Dutch Continental Shelf
<b>DGL</b>	Dangerous Goods List
<b>DNV</b>	Det Norske Veritas
<b>DRC</b>	Decision Review Committee
<b>DSC</b>	Delftsch Studenten Corps
<b>E&amp;P</b>	Exploration and Production
<b>EBN</b>	Energie Beheer Nederland B.V.
<b>EBITDA</b>	Earnings Before Interest, Taxes, Depreciation and Amortization
<b>EED</b>	Energy Efficiency Directive
<b>EITI</b>	Extractive Industries Transparency Initiative
<b>ESG</b>	Environmental Social Governance
<b>ETS</b>	Emissions Trading Scheme
<b>GBS</b>	Gravity Base Structure
<b>GDPR</b>	General Data Protection Regulation
<b>GHG</b>	Greenhouse Gasses
<b>GWP</b>	Global Warming Potential
<b>HFG</b>	Hydrofluorocarbons (refrigerant)
<b>HR</b>	Human Resources
<b>HSEQ</b>	Health, Safety, Environment and Quality
<b>IPIECA</b>	International Petroleum Industry Environmental Conservation Association
<b>IPPC</b>	Integrated Pollution Prevention and Control
<b>ISO</b>	International Organization for Standardization
<b>IT</b>	Information Technology
<b>KNRM</b>	Koninklijke Nederlandse Redding Maatschappij
<b>KYC</b>	Know Your Customer
<b>LLC</b>	Limited Liability Company
<b>LNV</b>	(Ministrie van) Landbouw, Natuur en Voedselkwaliteit
<b>LOC</b>	Loss of Containment
<b>LTIF</b>	Lost Time Injury Frequency

<b>MAP</b>	Major Accidents Prevention
<b>MBOE</b>	Thousand Barrel of Oil Equivalent
<b>MDR (DAC6)</b>	Mandatory Disclosure Regime DAC6
<b>MEAC</b>	Ministry of Economic Affairs and Climate
<b>MJA</b>	Meerjarenafspraken
<b>MNE</b>	Multi National Enterprise
<b>MSP</b>	Management System Process
<b>NGO</b>	Non-governmental Organisation
<b>NOGAT</b>	Northern Offshore Gas Transport
<b>NOGEPA</b>	Netherlands Oil and Gas Exploration and Production Association
<b>NORM</b>	Normally Occurring Radioactive Material
<b>NUI</b>	Normally Unattended Installation
<b>O&amp;G</b>	Oil and Gas
<b>OCM</b>	Operational Committee Meeting
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>OPEX</b>	Operating Expenditures
<b>OSD</b>	Offshore Safety Directive
<b>OSPAR</b>	Oslo Paris Agreement
<b>P&amp;A</b>	Plug and Abandonment
<b>PEPN</b>	Petrogas E&P Netherlands B.V.
<b>PGK</b>	Petroleum Geologische Kring
<b>PIEP</b>	Petrogas International E&P Coöperatief U.A.
<b>PPE</b>	Personal Protection Equipment
<b>PSA</b>	Psychosocial Aspects
<b>PT</b>	Petrogas Transportation B.V.
<b>PWC</b>	PricewaterhouseCoopers
<b>PWD</b>	Posted Workers Directive
<b>RM</b>	Risk Management
<b>RTAF</b>	Road Traffic Accident Frequency
<b>SEC</b>	Societal Ethics Committee
<b>SCM</b>	Supply Chain Management
<b>SCR</b>	Selective Catalytic Reduction
<b>SMART</b>	Safety Makes A Right Team
<b>SNS POOL</b>	Consortium of offshore operators sharing logistical platform
<b>SOBM</b>	Synthetic Oil Based Mud
<b>SPE</b>	Society of Petroleum Engineers
<b>SPS</b>	State Profit Share
<b>SSM</b>	State Supervision of the Mines
<b>TCM</b>	Technical Committee Meeting
<b>TRCF</b>	Total Recordable Cases Frequency
<b>UAV</b>	Utrechtse Aardwetenschappen Vereniging
<b>UBO</b>	Ultimate Beneficial Owners
<b>UDS</b>	Undrained Sands
<b>UK</b>	United Kingdom
<b>US</b>	United States
<b>USC</b>	Utrechtsch Studenten Corps
<b>WC</b>	Work Council



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The following indicators as per the IPIECA Sustainability Reporting Guidelines for the Oil and Gas Industry have been used throughout this document:

- Governance and Business Ethics: [GOV-1](#), [GOV-2](#), [GOV-3](#), [GOV-4](#), [GOV-5](#), [GOV-6](#);
- Climate Change and Energy: [CCE-1](#), [CCE-2](#), [CCE-3](#), [CCE-4](#), [CCE-5](#), [CCE-6](#), [CCE-7](#);
- Environment: [ENV-1](#), [ENV-2](#), [ENV-3](#), [ENV-4](#), [ENV-5](#), [ENV-6](#), [ENV-7](#), [ENV-8](#);
- Safety, Health and Security: [SHS-1](#), [SHS-2](#), [SHS-3](#), [SHS-6](#), [SHS-7](#);
- Social: [SOC-1](#), [SOC-2](#), [SOC-4](#), [SOC-5](#), [SOC-6](#), [SOC-7](#), [SOC-8](#), [SOC-9](#),[SOC-13](#), [SOC-14](#), [SOC-15](#).

The following indicators as per the GRI Sector Standard: Oil and Gas have been used throughout this document:  
[GRI 201](#), [GRI 202](#), [GRI 204](#), [GRI 205](#), [GRI 206](#), [GRI 207](#), [GRI 302](#), [GRI 303](#), [GRI 304](#), [GRI 305](#), [GRI 306](#), [GRI 401](#), [GRI 402](#), [GRI 403](#), [GRI 404](#), [GRI 405](#), [GRI 410](#), [GRI 413](#), [GRI 414](#), [GRI 415](#)

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