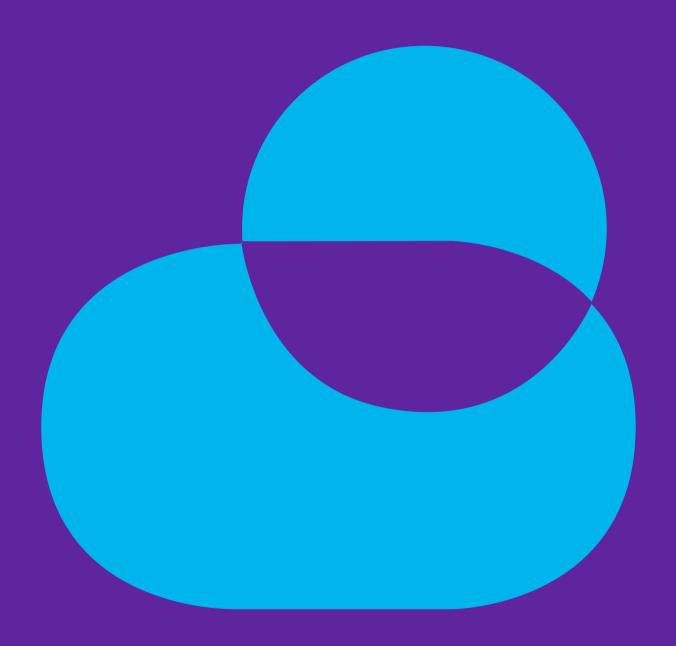
DIALOGUE

A JOURNAL FROM NORWEGIAN OCEAN INDUSTRY AUTHORITY



New name, same goal



We are Havtil

One reason why the government resolved last autumn to change our name from the PSA to Havtil is that our responsibilities have steadily expanded in recent years. Let's recap.

- In 2018, we were given regulatory responsibility for safety and the working environment in CO₂ transport and injection. Carbon capture and storage (CCS) is an important measure for reducing global greenhouse gas emissions, and storing CO₂ beneath the North Sea could be crucial for reaching Norway's climate goals.
- In 2020, we acquired the same authority for renewable energy production at sea. Offshore
 wind has many similarities with petroleum operations, and we will ensure that safety in
 this emerging sector is taken good care of through effective regulation and supervision.
- In 2022, responsibility was delegated for safety and emergency preparedness in future recovery of seabed minerals from the NCS. Such deposits are currently being mapped with the aid of technology and expertise from the petroleum industry.
- In 2023, we were given supervisory responsibility pursuant to the Security Act for the petroleum industry.

Regardless of these changes, our goal remains the same – to help safeguard life and health for everyone covered by our supervisory regime. But we will be working under a new name from 1 January.

In our view, Havtil – short for the Norwegian Ocean Industry Authority – is a good title. Petroleum operations offshore and on land will continue to be very important for Norway – and for us. But our new designation points the way forward, and accommodates both existing and emerging offshore industrial activity.

This issue explains who Havtil is, what our key duties are and what we see as our most important priorities in work on safety, the working environment, emergency preparedness and security.

Enjoy! Øyvind Midttun Editor



CONTENTS

It concerns everyone	4
No compromises by the government	8
Parameters for tomorrow's workplaces	12
Facts: Petroleum activities	16
Facts: CO₂ transport and storage	20
Facts: Seabed minerals	22
Facts: Offshore wind	24
Facts: Security	26
Tough times, big responsibility	28
Main issue 2024:	
Don't forget the working environment!	32

BY INGER ANDA

E Havindustritilsynet

It concerns everyone

Those of us who've lived in Norway for a while have passed many milestones. Energy has played a key part in our recent history of change – particularly the initial discovery of oil in 1967. The time has now come to expand our horizons in this area and build further on what we've learnt.

The PSA became Havtil on 1 January 2024. While the authority has a new name, its goal remains unchanged: to help safeguard the life and health of everyone covered by its supervisory regime. (Photo: Anne Lise Norheim)



ost Norwegians were astonished when our small nation discovered its black gold in the 1960s. Against all the odds, our continental shelf had proved to

hold large amounts of oil and gas.

This discovery and the major offshore development projects which followed permitted the continued growth in our national prosperity.

We also became a groundbreaker in engineering and innovation. Technological advances offshore were mentioned in the same breath as the 1969 moon landing, marking an age of greatness for us.

Now we're at a crossroads. That requires us to adapt to a new reality and to recognise that the future will be shaped in a new image, based on what we've learnt since the 1960s.

A tiny – but nevertheless significant – element in this global perspective is that three of our government bodies working with oil and gas were renamed on 1 January 2024.

The Petroleum Safety Authority Norway (PSA) became the Norwegian Ocean Industry Authority (Havtil), the Norwegian Petroleum Directorate (NPD) is now the Norwegian Offshore Directorate (NOD) and the Ministry of Petroleum and Energy (MPE) has changed to the Ministry of Energy (ME).

Global politics

The PSA became Havtil on the very day that we could celebrate our 20th anniversary as an independent agency. Policy considerations provide a backdrop to this change

Given Norway's backing for the internationally approved goals on reducing greenhouse gas emissions, the government and the Storting (parliament) are staking out a new course.

Many of the global changes of direction concern energy production and use. The world must adapt, and so must those administering the energy sector. Hence the government's decision last autumn to make the three name changes.

We in the PSA had long been preparing for this. Given our detailed knowledge of the oil and gas sector, we can now apply crucial expertise to framing regulations and supervising safety for other industrial production at sea.

That experience and our staff of relevant and qualified specialists create the confidence in us which has resulted in the award of wider responsibilities over recent years.

We were put in charge of supervising CO_2 transport and storage in 2018, renewable energy generation at sea (offshore wind power) in 2020 and seabed minerals in 2022. In 2023, we also acquired supervisory responsibility pursuant to Norway's Security Act.

The expertise we have built up over half a century will make an important contribution to the future energy journey. That also holds true for many other players and companies in the oil and gas sector.

Sea and shore hand-in-hand

As noted, we have more than five decades of experience as a safety authority. Originally a division of the NPD from 1972, we were

established as a separate agency in 2004. See the fact box to the right.

This followed a recommendation in White Paper no 17 (2002-2003), composed by labour minister Victor D Norman in Kjell Magne Bondevik's second centre-right coalition.

At the same time, we were given supervisory responsibility as a new independent authority for all petroleum-related land plants in Norway.

New name, same goal

Our strategy as Havtil states that we will contribute to the government's goals for the green transition.

But everyone knows that the energy industry will not change overnight – far from it. Norway will remain an oil and gas nation for many years to come. The shift away has only just begun.

Continuing our societal role as Havtil does not mean in any way that we will be less concerned about safety and the working environment for everyone employed in petroleum production on the NCS and at the land plants.

Our goal will be the same as before – to help safeguard life and health for all personnel covered by our supervisory regime.

As Havtil, we are an agency dedicated to everyone working to provide Norway with energy, faith in the future and resources.

That's a responsibility we approach with the greatest seriousness. On behalf of everyone in Norway. * The NPD was originally responsible for both safety and resource management. However, a key differentiation was introduced from 1978 when its two parts began reporting to separate ministries.

That was because the government wanted to segregate decisions where safety could come into conflict with financial interests.

In 2023, however, we at the PSA were transferred from the Ministry of Labour and Social Inclusion to the MPE – the ministry also responsible for offshore resource management.

This move was primarily motivated by the security position which had developed after the Russian invasion of Ukraine in 2022.

Our knowledge of and expertise concerning security as well as our supervisory responsibility pursuant to the Security Act were key factors underpinning the decision. BY ØYVIND MIDTTUN

No compromises by the government

Norway will continue to aim at being the world leader for HSE in the emerging offshore industries, says state secretary Astrid Bergmål at the Ministry of Energy (ME).







ressure on costs will never be allowed at the expense of safety, the junior minister has emphasised. "That occupies a crucial place in all work on the new industries.

"The energy position is changing and security conditions have altered. Working on safety will thereby become even more important."

On 1 January 2024, the Petroleum Safety Authority Norway (PSA) was renamed the Norwegian Ocean Industry Authority (Havtil).

Bergmål attended the name-changing ceremony, and used the occasion to emphasise the importance of good safety work. She also repeated and reinforced a government ambition for the level of safety, which applies to both the petroleum sector and new industrial operations offshore.

World leader

"We are in a time when new ocean industries are under development and the level of activity in the petroleum sector is high," she said. "At the same time, we see rising costs, increased interest rates and greater inflation."

That could put pressure on HSE, which therefore made it important to be aware and clear, Bergmål added. "We'll never compromise on HSE."

Security

The security position has led to a lasting requirement for increased alertness and concentration on national security, not least on the NCS.

National security is a priority for the government.

Work on security occupies a key place at Havtil. The authority has exercised supervision in this area pursuant to the Petroleum Act since 2013, and was also appointed the regulatory authority for the petroleum sector pursuant to the Security Act in 2023.

The Norwegian government upgraded the threat level on the NCS in 2022, and Bergmål emphasised that this continued to apply.

"It's easy to imagine that the security position we currently face is short-term and will soon pass," she said. "But what we know is that the alertness required is here to stay.

"The new normal is that we face more complex threats. Havtil has an important role both in cooperation at government level and in following up the industry in this context."

New name, same goal

Bergmål said that the change of name made it clear that Havtil's responsibility had expanded, but that the goal remained the same.

"With emerging industries which require new regulations and supervision, we need a strong regulator more than ever. The key duties and priorities are nevertheless the same as before.

"The Norwegian labour model forms the basis, and collaboration between companies, unions and government occupies a crucial place. This is well entrenched in the petroleum industry.

"Safety delegates, the structure of elected employee representatives and the established bi- and tripartite arenas have great value, and will also be important as we develop the new industries."

The bulk of Norway's offshore energy sector will continue to be related to the petroleum industry, where the level of activity is high, Bergmål emphasised.

But activity is now also increasing in Havtil's new areas of responsibility.

- The first large offshore wind projects on the NCS will be allocated project areas in 2025.
- Longship, the government's demonstration project for full-scale CO₂ management, is on schedule to come on line in 2025.
- The government is continuing to award acreage for commercial CO₂ storage on the NCS.

 Norwegian seabed minerals will be administered by the government in the time to come in a prudent and sustainable manner, initially by increasing knowledge, exploring and prospecting.

Bergmål noted that the change of name simultaneously reflects a closer integration of the actual energy system over recent years.

She mentioned renewable energy, oil and gas and new low-emission technologies like hydrogen and carbon capture and storage (CCS), before noting: "this is no longer a question of separate industries, but a single energy sector". *



Activity in Havtil's new areas of responsibility is growing, but the petroleum sector will continue to provide the great bulk of its work for a long time to come. (Photo: Anne Lise Norheim)



Parameters for tomorrow's workplaces

New regulations will ensure a high level of health, safety and the environment when producing renewable energy on the NCS.

roposed rules covering safety and the working environment at future offshore workplaces were issued for consultation on 1 December 2023, with a 1 March 2024 deadline for responses.

Sigve Knudsen, director for legal and regulatory affairs at Havtil, lists a set of main guidelines which have underpinned work on this draft.

"A high level of HSE must prevail in Norway's new offshore industries. That's a very clear mantra from politicians, central government and the companies and unions involved."

While the starting point in producing the new regulations has been experience from oil and gas, he says account has also been taken of the distinctive features of the new industries. These differ from petroleum operations in a number of ways.

"That's sensible and logical, and it's how we're accustomed to working – risk-based, tailored to the business and thereby also cost-efficient.

"We've also taken account of how offshore wind power is regulated on land in Norway and offshore internationally."



"The proposed regulations reflect a way of regulating renewables activity which is riskbased, tailored to the business and thereby also cost-efficient," says Sigve Knudsen, director for legal and regulatory affairs at Havtil. (Photo: Anne Lise Norheim)

Important principles

Some key principles were established at an early stage in work on the regulations.

They would be risk-based and systemoriented – in other words, inspired by the petroleum regulations – reflect the risks presented by the business, and clarify the responsibilities of the players.

As far as possible, relevant existing regulations would be adopted or referenced rather than creating new special rules unnecessarily.

It was also natural to apply an industrial perspective and to assume that the Working Environment Act would govern this type of offshore activity.

The regulations would cover all types of offshore wind power, including projects generating electricity for use by petroleum facilities – such as Hywind Tampen.

Requirements would be performance-based, with associated guidelines and references to recognised norms – preferably international standards.

The regulations would be developed in dialogue with companies, unions and other government agencies.

Several of these tenets also apply to Norway's petroleum regulations. Experience with this method of supervising operations has been good and the transfer value is high, explains Knudsen.

"Renewable energy at sea may be a new type of industry, but has much in common with the petroleum business. Both involve energy production and industrial activity offshore."

While accepting that the risk picture is not the same, he says Havtil sees a number of the same operational challenges since both involve work at sea.

"The basic principles for regulating the petroleum industry, with allocation of responsibility, the use of risk-based, system-oriented and performance-based requirements, and so on, have proved to be a good approach. We've taken it with us."

Close contact

The draft regulations have been developed in close contact with the companies and unions through the Regulatory Forum. Knudsen admits that the process has been demanding.

"When we started the work, we ran almost at once into what I'd call massive opposition. The initial discussions in the forum became difficult and were characterised by great scepticism."

That applied particularly to the employer associations, he explains. They feared the regulations would "take off", driving up costs while becoming overdimensioned for the renewables business.

"During the talks, we encountered a rhetoric I find questionable. One word in particular often recurs when talking about safety – the little conjunction 'but'.

"We hear such typical formulations as 'we'll have a high level of HSE, but we must remember that ...'. Introducing 'but' in these contexts overshadows the first part of the sentence."

He emphasises that this is unacceptable. "We're also going to have a high level of HSE in the new ocean industries. End of story. That goal is entrenched right to the top of both government and Storting (parliament)."

Good product

Knudsen maintains that the proposed regulations provide a means of regulating renewable energy activities which is risk-based, industry-tailored and thereby also cost-effective.

He gives credit to participants in the work. "Very positive and constructive dialogue has prevailed for much of the time over how we can create good regulations for offshore renewables. That's created a good product."

FACTS:

New regulations on the way

Havtil acquired regulatory responsibility in 2020 for safety and the working environment related to renewable energy production offshore.

Draft regulations for these aspects of this emerging industry were issued for public consultation on 1 December 2023.

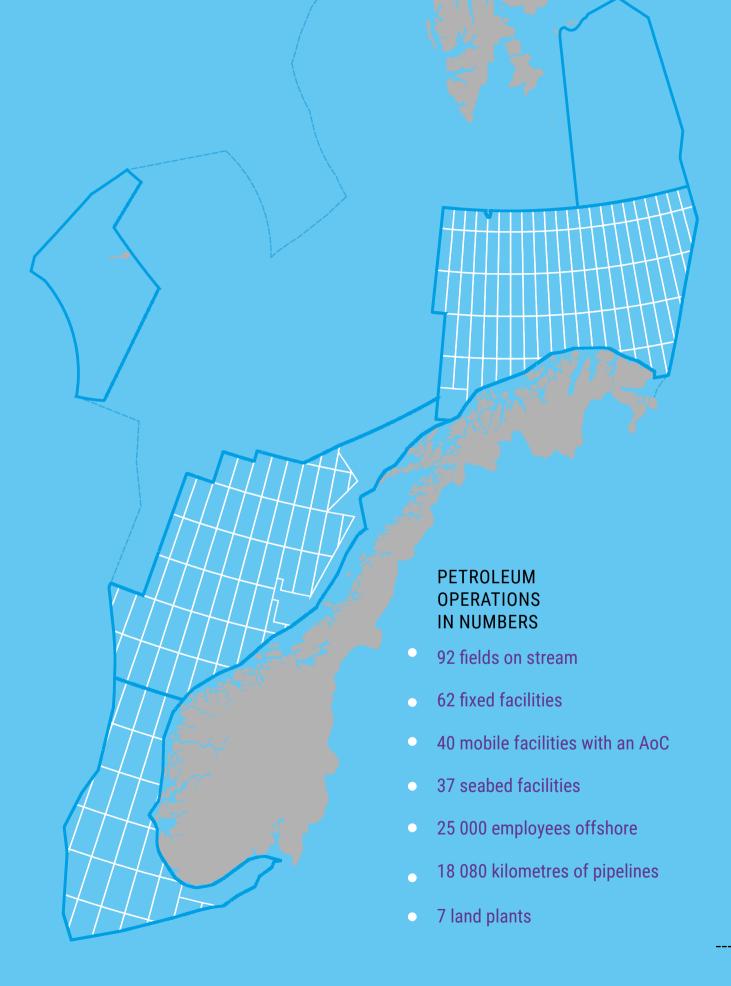
The deadline for responses is 1 March 2024. Havtil will then review the comments received before the new rules are adopted.



FACTS: PETROLEUM ACTIVITIES

Oil and gas have been produced on the NCS for more than 50 years. At the moment, 92 fields are on stream – and the industry still has many years ahead of it.





FACTS: PETROLEUM ACTIVITIES

Havtil's role

Havtil has regulatory responsibility for safety, the working environment, emergency preparedness and security in the petroleum industry. It develops the HSE regulations and supervises that the companies operate prudently.

The expertise of its specialists and knowledge gained from audits mean the authority has a lot of information. Communicating this helps to maintain high levels of safety and the working environment.

Havtil also serves as a directorate, providing technical advice to the Ministry of Energy as its parent body. Supervision is exercised over petroleum operations

on the NCS and at seven associated land plants. Responsibility for the latter was conferred in 2004.

The land plants are closely integrated technologically and organisationally with offshore petroleum activities, and the same regulations apply to both sea and shore.

Havtil's annual RNNP survey measures trends in risk level in the petroleum activity. Results for personnel risk offshore and at the land plants are presented in April, with a report on the risk of acute discharges in the autumn. This work contributes to a shared understanding of risk developments across the industry. *











MILESTONES FOR SAFETY 1962 First application to the government for oil prospecting on the NCS First production licences awarded, with safety requirements included in their terms 1965 First exploration well spudded 1966 Ekofisk field proven 1969 Storting (parliament) adopts the "10 oil commandments", ensuring national 1971 regulation and control of oil operations Storting approves the creation of the Norwegian Petroleum Directorate (NPD) 1972 Bravo oil blowout from the Ekofisk field's 2/4 B facility prompts a detailed 1977 review and evaluation of the safety regime Working Environment Act extended to permanent facilities on the NCS 1980 Alexander L Kielland disaster, with 123 fatalities. Follow-up leads to far-reaching changes in the established organisation of regulatory responsibility for HSE Storting passes the Petroleum Act. NPD receives sole responsibility 1985 for regulatory development and supervision in the petroleum industry, covering both fixed and mobile facilities 1992 Working Environment Act extended to mobile facilities 2001 Safety Forum established NPD's safety department hived off as the Petroleum Safety Authority Norway (PSA), which also receives regulatory authority for all land plants 2004 involved in oil and gas operations 2013 PSA responsible for following up section 9-3 of the Petroleum Act on security

2018 PSA responsible for carbon transport and storage

2020 PSA responsible for renewable energy production offshore

PSA responsible for seabed mineral operations

PSA named sectoral supervisor for the petroleum sector under the Security Act

2024 PSA renamed the Norwegian Ocean Industry Authority (Havtil)

FACTS: CO₂ TRANSPORT AND STORAGE

Storing carbon securely represents an important measure for cutting global greenhouse gas emissions. Havtil regulates and supervises transport and storage of CO₂ on the NCS.

THE PROCESS HAS THREE STAGES



CAPTURE: CO₂ is separated from other gaseous components in industrial emissions or natural gas.

TRANSPORT: The CO₂ is liquefied through compression to simplify transport by either ship or pipeline.

STORAGE: Liquefied CO₂ is injected in formations deep beneath the seabed for permanent and secure storage, followed by monitoring to prevent leaks.

Norway has worked for many years to realise a costefficient solution for full-scale CO₂ management.

According the UN and the International Energy Agency (IEA), CCS will be essential for meeting climate targets as cost-efficiently as possible.

The government's Longship project for realising full-scale carbon capture, transport and storage is named after Scandinavia's historical Viking ships.

It involves freighting CO₂ obtained from industrial enterprises in eastern Norway to an intermediate holding facility in Øygarden near Bergen.

It will then be pumped through pipelines for permanent storage 2 600 metres beneath the seabed. Plans call for the project to be ready for start-up in 2025.

Long experience

Norway has more than 25 years of experience with safe carbon storage on its Sleipner and Snøhvit fields. Ranked as Europe's only operational CCS projects, these provide valuable experience for work on future CO₂ management.

Safe storage

Storing CO₂ underground requires a porous and permeable formation covered by an impermeable cap rock. The Norwegian Offshore Directorate (formerly the Petroleum Directorate) has created an atlas showing safe and effective storage areas on the NCS.

Regulation and supervision

Havtil regulates and supervises CO₂ transport and storage off Norway. That includes consenting to

Roger Leif Leonhardsen is part of Havtil's structural integrity discipline team, whose work includes following up planned projects related to carbon transport and storage. (Photo: Anne Lise Norheim) inspection wells, following up plants and handling interfaces with other government agencies.

In addition, it participates in licence awards, management bodies for projects and international collaboration between regulators.

The goal is to ensure safe CO₂ storage through regulations, guidance and supervision in line with technological developments.

New areas

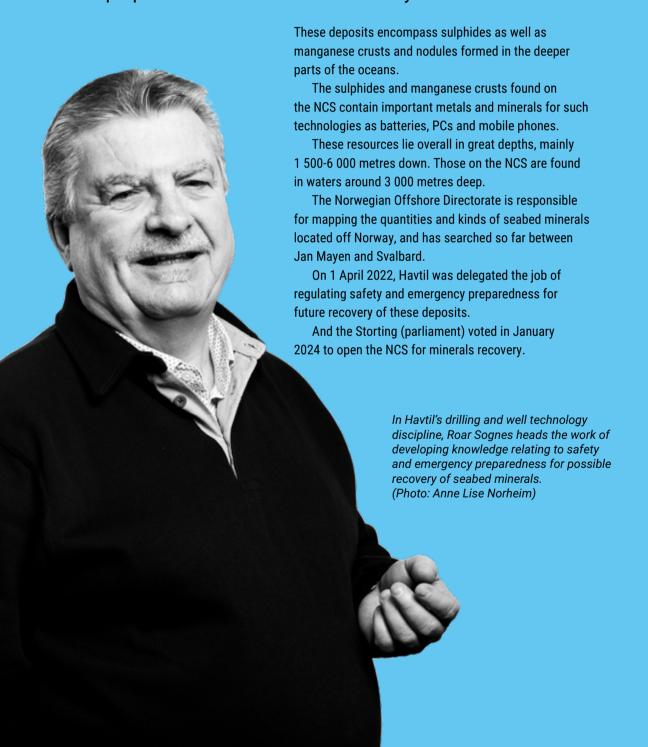
More companies are now launching plans for CO₂ transport and storage on the NCS, and new acreage has been awarded for such ventures after detailed assessments of safety and expertise.

When considering applications, Havtil emphasises risk management of possible existing wells in the storage complex, and whether the applicant meets award criteria – including operational experience. *



FACTS: SEABED MINERALS

Havtil has regulatory authority for safety and emergency preparedness related to the recovery of seabed minerals.



Developing regulations

The process of drawing up requirements for safety and the working environment when recovering seabed minerals will be launched by Havtil in 2024.

"As the specialist agency, we'll be helping to regulate this activity in a safe and prudent manner," says Sigve Knudsen, director of legal and regulatory affairs at the authority.

"We must then build on existing knowledge and ensure that the requirements take account of the safety challenges posed by this type of operation."

He notes the importance of understanding the business, the kind of HSE challenges involved in mineral recovery and how the regulations should be framed.

"If such deposits are to be produced from the NCS, this will be done safely," he emphasises.★



FACTS: OFFSHORE WIND

Havtil is developing regulations for and will supervise the construction and operation of wind farms at sea. The government's ambition is to award NCS acreage with a potential for generating 30 gigawatts (GW) by 2040.

Two areas off Norway have so far been opened for developing offshore wind – Utsira North, suited to floating turbines, and Southern North Sea II for both fixed and floating units.

Fixed turbines can currently be installed in waters up to 60 metres deep and account for most of the offshore wind developments on stream or under construction worldwide so far.

Many different types of support structure are available for fixed turbines. Which of these might be chosen depends on water depth and seabed conditions at the site.

Floaters are the only option today in waters more than 100 metres deep, and various technologies for these are under development.

Their common denominator is that that the floating structure must be able to cope with high waves, strong currents, and challenging weather.

Water depths on the NCS mean that floating turbines offer the biggest potential for offshore wind there.

Output

The amount of electricity a wind turbine is able to generate in a year can be calculated from its capacity factor, defined as average output divided by rated peak power.

In other words, it describes the energy actually produced in the course of year as a proportion of total output were the turbine to operate at full capacity throughout.

Modern land-based wind turbines have a capacity factor of around 35 per cent, while the latest offshore units can reach up to 55 per cent.

The government's 2040 goal of handing out acreage which could yield 30 GW of wind power on the NCS corresponds to 75 per cent of the capacity in the Norwegian power generation system today.

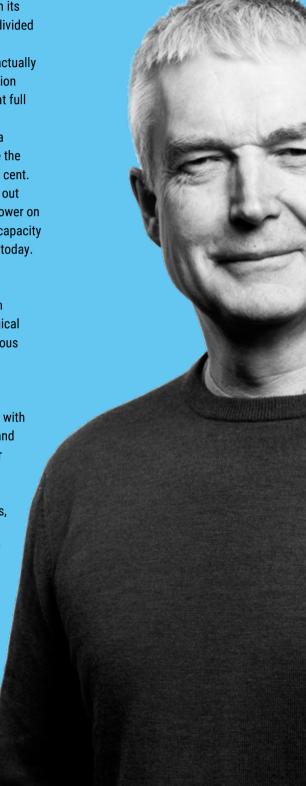
Risk

Offshore wind has features in common with petroleum operations in terms of technological and operational solutions, and for their various stages – design, construction, installation, operation, maintenance and removal.

Several parallels also exist where risk is concerned. But the biggest hazard involved with petroleum – handling large volumes of oil and gas under pressure – is naturally absent for wind power.

The threat of a major accident with the latter is thereby much smaller. Nevertheless, it could also potentially experience major accidents and incidents involving a number of fatalities. *

Torleif Husebø heads Havtil's process integrity discipline, and is also heavily involved in work on renewable energy at sea (offshore wind). (Photo: Anne Lise Norheim)



FACTS: SECURITY

Havtil distinguishes between the concepts of safety and security.

While the first of these is about preventing accidents associated with an enterprise's legal activities, the other concerns preventing undesirable deliberate incidents/ attacks.

Security

Havtil pursues system-oriented and risk-based supervision where security is concerned.

Section 9-3 of the Petroleum Act requires licensees to implement and maintain security measures to help prevent deliberate attacks on facilities, and to have emergency plans at all times for responding to such assaults.

Close contact is also maintained by Havtil with other relevant agencies in the security area, as well as with the companies and unions in the sector.

Security Act

The purpose is this legislation is to safeguard national security interests. It aims to help prevent, uncover and counter security threats – in other words, deliberate acts which could harm Norway's security directly or indirectly.

Havtil was appointed in 2023 as the supervisory authority pursuant to the Act for the petroleum industry.

Societal safety

Societal safety is defined as society's ability to protect itself against and deal with incidents which threaten basic values and which put life and health at risk.

Such events could have natural causes, or be the outcome of technical faults, human errors or deliberate actions – including digital attacks.

Havtil is responsible for societal safety in the petroleum sector, which primarily involves contributing to situational awareness and the risk picture in and for the industry.

Total defence

The authority also contributes to Norway's total defence – a collective term for the country's military and civil preparedness.

This involves mutual support and collaboration between the armed forces and civil society on prevention, emergency response planning and operational conditions.

The aim of a total defence is that society, whatever the emergency, can maintain a functioning crisis leadership, handle large numbers of injured people, and safeguard food, water and power supplies as well as communication and transport systems. *



BY ØYVIND MIDTTUN

Tough times, big responsibility

Security and societal safety are high on the agenda at Havtil in 2024. But its list of other priorities is a long one. he world is experiencing turbulent times and an extremely demanding security-policy position, says Havtil director general Anne Myhrvold.

"The threat level is high and we're fairly certain it will remain so. We can talk about a new normal."

Norway is the central supplier of natural gas to Europe, and that makes particularly high demands on security work, she emphasises.

Integrated assessments

"We've followed up that the industry is working in an integrated manner on safety and security, and have contributed to an improved awareness of the position both in the industry and at other government agencies," Myhrvold reports. "We'll be continuing with that in 2024.

"Delivery reliability, critical infrastructure, cyber security and insider risk are key considerations and priorities which must be high on the agenda. At the same time, we'll maintain and improve safety and the working environment.

"We're in a position which demands a lot from us all. And making good assessments, both individually and collectively, is essential.

"We must be able to see the overall picture while ensuring good collaboration and laying the basis for employee participation with both safety and security."

"We're in a position which demands a lot from us all. And making good assessments, both individually and collectively, is essential," says Havtil director general Anne Myhrvold. (Photo: Anne Lise Norheim) The list of important areas for 2024 is a lengthy one, and includes supervision of the industry, acquiring and communicating knowledge, regulatory development and information.

Among others come providing advice to the ministry. These are all highly specialist subjects and cross-disciplinary issues.

The points listed below are some of those observed by Havtil during 2023, and which it will follow up professionally and through audits in the coming year.

1. MANNING AND EXPERTISE

"Manning and expertise remain a challenge," affirms Myhrvold. "Our audits show a mismatch between all the assignments to be undertaken and the resources available."

The result is high workloads, she says, and notes that Havtil sees an increasing use of overtime.

"We have commented in a number of audits on deficiencies in the management of working hours. In addition to direct breaches of the overtime rules, we see weaknesses in both knowledge of the working time regulations and follow-up of hours worked.

"Challenges related to manning, expertise and working hours could increase health hazards and also lead to errors being committed, and we'll continue to follow this up in our audits."

2. AVOIDING HYDROCARBON LEAKS

"Leak prevention is crucial," Myhrvold says.
"This is a case of ensuring that you understand the risk and have barriers in place to avoid HC leaks or to reduce their consequences if they nevertheless occur."

She observes that Havtil audits and investigations related to such incidents reveal deficiencies.

"This is about risk awareness in the companies, risk analyses, barriers, and planning and executing work.

"Where leaks are concerned, we pay particular attention to the land plants. The statistics there are moving quite clearly in the wrong direction."

3. MAINTENANCE

"Maintenance is important for safety," Myhrvold emphasises. But figures from the annual survey on trends in risk level in the petroleum activity (RNNP) and findings from Havtil's audits reveal extensive deficiencies in the basis for managing maintenance work.

"This will continue to be a subject in our audits," she says. "We've also conducted a fairly large number of learning projects in this area, and it's important that the players pick up on these. Companies must ensure they have the necessary knowledge."

4. NEW PROJECTS

Many applications with plans for development and operation (PDO) were submitted in 2022, the director general observes. A number of these remain in an early phase, while other projects are approaching completion.

"Our audits find conditions which the companies themselves should have discovered earlier," Myhrvold notes. "We know that fixing things in the final stage often incurs extra costs and delays timetables. This can also have consequences for safe start-up.

"So good management in the project phase is important. We've worked on this and will continue to follow it up.

"We've also produced a number of reports on good project management which provide valuable knowledge the companies should be applying."

5. PORE PRESSURE

"Pore pressure is a relatively specific aspect of drilling and well technology, but one worth highlighting," says Myhrvold.

"We've commissioned an in-depth study which reveals precisely how important it is to understand such pressure and handle it in a good way to avoid well control incidents.

"We've held a series of meetings with the companies, and check in part that new guidelines are being used. We'll also hold an industry seminar on risk and uncertainty with pore pressure estimates."

6. LIFTING INCIDENTS

Far too many lifting incidents still occur in the petroleum industry, both offshore and on land, comments Myhrvold, and notes that a lot of these reflect operational conditions.

"Together with the companies and unions in the collaboration committee for lifting operations and equipment, we've paid extra attention to expertise," she says.

"Curricula have been developed for offshore crane operators, and these must be adopted."

7. OPERATING PARAMETERS

Operating parameters are a big issue, Myhrvold says. "We've commissioned a report where industry players describe the challenges they see as a result of changes to parameters, including contracts and contractual terms.

"We're following up, both with individual companies and in tripartite arenas, over how to work better on these issues.

"We see there's increased understanding and that things are moving, but a lot remains to be done here."

8. ARTIFICIAL INTELLIGENCE

"Al is also a very big topic," she acknowledges. "But it's important to put it on the agenda in an industry vulnerable to major accidents like oil and gas. Al must be used prudently.

"We will pay close attention to developments here, including the use of AI in well planning.

"A lot's also happening on the regulatory side, including in the EU, and it's important that we keep tabs on this as well.

"The use of AI offers opportunities, but we must understand and take account of the risks involved."

9. DON'T FORGET THE WORKING ENVIRONMENT

Havtil's main issue for 2002 is don't forget the working environment, Myhrvold reports (see also page 32).

"This is a slogan with a brief explanatory text which we use as a strategic tool in relation to company managements in the industry in order to provoke discussion – and action."

Choosing the working environment as a main issue does not mean that this is in a particularly poor condition, she explains.

"But we have some concerns related to the fact that so much is happening so fast – digitalisation, new technology, AI, changes to operating parameters and other ways of working.

"We see, of course, that accidents happen, that people are injured or get sick. It's important to think in an integrated way about preventive safety work, and that the working environment is not then forgotten."

Myhrvold explains that Havtil is highlighting the working environment now for two reasons.

"The first of these is the working environment itself. Section 1 of the Working Environment Act on its purpose calls for a working environment which provides a basis for healthy and meaningful work. So it's not enough just to avoid people falling ill.

"This section goes on to require secure conditions of employment, a satisfactory climate for expression, establishing a basis for cooperation between employer and employees, and contributing to inclusive working conditions."

The second reason is equally important, she says, and concerns the connection between the working environment and major accidents. "They're not on separate planets, but hang together closely.

"As I mentioned above, we've commissioned a study of well control incidents and see that many factors are involved. An important one is the way management tackles changes.

"Change management is crucial when we're talking about the working environment.

"We also know that the psychosocial working environment is a clear condition for avoiding major accidents.

"It's also crucial for the security-policy picture and for preventing insider risk to understand the working environment and to work well with this."

10. ALL THE OTHER TASKS

"I might have mentioned a lot more points," Myhrvold comments. "We could have talked about temporary hires, helidecks, evacuation, plugging wells, corrosion under insulation, carcinogenic chemicals or hyperbaric medicine.

"The list is a long one. We work with many, many more issues which we have concerns about.

"The companies must accept the responsibility they are given, and work well on preventing accidents and illness. That involves tackling all these issues, individually and collectively."

Main issue 2024

Havtil's main issue for 2024 calls on the companies to pay more attention to the individual and the role of the working environment. It provides a basis for reflection, discussion – and action.

Don't forget the working environment!

The energy sector is changing. Technological progress is extremely rapid, and expectations are high.

The industry must constantly adapt and master new solutions. The companies have to retain and build organisations which take care of safety and the working environment in a good way.

Good results depend on a good working environment, on looking after the people who will create a positive future on behalf of us all.

The working environment is part of the manager's overall responsibility – don't forget it.



New logo

Havtil's logo is built up from three basic forms – the circle, the wave and the reservoir. The first symbolises solar power, the second wind power and the third seabed resources.

These shapes combine into a single expression representing an overall picture, and Havtil's supervisory role in both existing and emerging industrial operations offshore.





RESPONSIBLE PUBLISHER

Norwegian Ocean Industry Authority (Havtil)

Professor Olav Hanssens vei 10

P O Box 599

NO-4003 Stavanger

Tel: +47 51 87 32 00

E-mail: postboks@havtil.no

Website: www.havtil.no

EDITORIAL STAFF

Inger Anda (editor-in-chief/journalist)

Øyvind Midttun (editor/journalist)

Eileen Brundtland (journalist/web editor)

Olav Hove (journalist)

Janne-Beth Carlsen N'Jai (graphic designer)

Margrethe Hervik (distribution)

Rolf E Gooderham (English editor/translator)

PRINT RUN

Norwegian: 5 500

English: 2000

PAPER

Cover: Munken Polar, 300g

Inside pages: Munken Polar, 150g

PRINTER

Aksell, Stavanger

This issue went to press on 26 January 2024.

Abbreviations used in this issue

AoC: Acknowledgement of compliance

CCS: Carbon capture and storage

Havtil: Norwegian Ocean Industry Authority

HSE: Health, safety and the environment

NCS: Norwegian continental shelf

PSA: Petroleum Safety Authority Norway

scm oe: standard cubic metres of oil equivalent





ISSN 1893-7292