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DIALOGUE

A JOURNAL FROM THE PETROLEUM SAFETY AUTHORITY NORWAY

“Developing,
not winding
down”

CHECKING OUT A CHANGING INDUSTRY





Development is the word

The pace is quickening again in the petroleum industry. Oil and gas prices have yielded record profits, tax arrangements ensure full speed ahead in developing new fields, and the fight is on over expertise. The government has signalled that the industry will be developed, not wound up.

At the same time, companies are meeting ever stricter requirements from both politicians and society as a whole relating to climate, sustainability and the energy transition.

A number of companies have drawn up strategies for change, and are working to enter new areas. They are committing to renewable energy, low-emission solutions and such climate measures as carbon capture and storage (CCS).

This issue will provide insights into some of the demands on and expectations for Norway's largest and most profitable industry. These signals come from different quarters – politicians, climate activists, capital managers and employees.

Changes to the industry also affect the PSA. Our expertise is finding applications in new areas, such as offshore wind power and CCS.

At the same time, we are paying close attention to the industry's restructuring work in order to reassure ourselves that the priorities set do not undermine safety.

Our annual main issue sends an important signal to the industry and provides a basis for discussions on and measures for improvement. This edition summarises work on the 2021 issue and looks at what effect it has had.

We also present our main issue for next year: *Capacity and competence – the key to safety*. This topic is highly relevant for both the future of oil and gas and the development of new energy sectors.

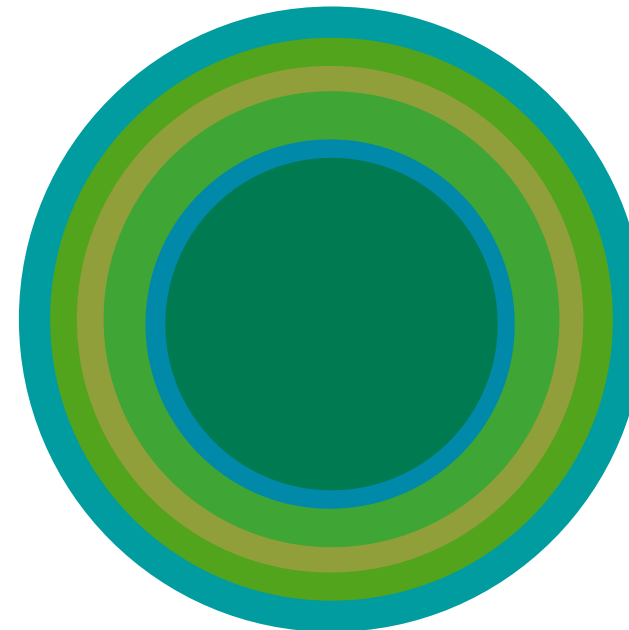
Enjoy.

Øyvind Midttun
Editor

Front cover: Labour and social inclusion minister Hadia Tajik says the government will develop, not wind down the petroleum industry, and emphasises that the ambition of being the world leader for HSE remains unchanged. (Photo: Janne Møller-Hansen/VG)

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SECURING the sector

THE
INDUSTRY'S
FUTURE
POLITICS

*Hadia Tajik, minister of labour and social
inclusion. (Photo: Ole Berg Rusten/NTB)*

Great expectations for the industry's work on health and the working environment are expressed by Hadia Tajik, Norway's minister of labour and social inclusion. That applies to both oil and gas and new areas of commitment.

The recently appointed minister is experiencing busy days in her new post. She explains here what underlies the government's statement that oil and gas will be developed rather than wound up, and how she sees the industry's future.

The government has said its aim is developing, not winding up the petroleum sector. What does that involve – and what significance does this industry have in overcoming the climate challenges?

Developing, not winding up is about seeing the links between what the oil, gas and supplier industry gives us in terms of expertise, economic value and energy security at a fairly crucial time.

Our aim is to cut emissions while creating jobs. The petroleum sector will then still need operating parameters which give us revenues and jobs nationwide.

At the same time, we'll be reducing emissions from the NCS – in part with the aid of CCS and increased use of electricity.

We must build climate-friendly industries on the shoulders of what we have today. The petroleum sector has a crucial role to play in overcoming the climate challenges while ensuring that Norway's economic diversity increases.

Expertise from this industry can lay the basis for other sectors. Lessons learnt from many years of installing subsea systems are important for offshore wind power.

Similarly, experience from the NCS is vital for success with carbon storage. In the same way, we can make more out of the minerals on the seabed.

Security of supply is also important. When the whole world is set to undergo a decisive energy transformation, success will be impossible unless we feel sufficiently sure that we can provide both for the big users and for individuals in their daily lives.

Together with the industry, our aim is to cut NCS emissions from producing oil and gas by 50 per cent in 2030 and to zero in 2050. This sector will thereby also be a trailblazer in reducing emissions.

How important is that the companies have, and continue to develop, a high level of safety and a good working environment?

Norway's petroleum industry will be the world leader for HSE. That means we must work constantly for improvement. This industry has a major accident potential, where even minor errors and mishaps can lead to serious harm.

To avoid accidents and acute discharges or emissions, it's essential to work continuously on improvements and prevention. The companies must always ensure a good and safe working environment both offshore and onshore.

What's needed to achieve that?

Companies themselves bear the main responsibility for keeping their operations safe and prudent. Today's Norwegian HSE regime depends entirely on their awareness of this duty and on treating it with the greatest seriousness.

A crucial role is played here by the PSA. Its supervision must be strong and unambiguous in terms of reactions and follow-up of the companies.

The bar for deploying stronger instruments must be lowered when risk and the seriousness of accidents rise, and the PSA must consistently ensure that nonconformities found are corrected.

Good collaboration between companies, unions and government is also important, and must be characterised by open communication and mutual respect.

Positive worker participation at every stage is not least important for conducting prudent petroleum operations. Employees have expertise and experience which the industry must actively listen to.

Does the ambition of being the world leader for HSE also apply to other energy production on the NCS, such as wind power?

The ambition for a high level of safety and good working conditions naturally also covers new forms of offshore energy output.

HSE regulations for transporting and storing CO₂ are already in place, and the PSA has now also been commissioned to develop parameters and regulations for offshore wind power.

Where other industries are concerned, I'm convinced that the experience already acquired by the PSA will also be of great value.

It could eventually be necessary to provide supervision for more areas on the NCS, but that still remains to be seen. ★

BY OLAV HOVE

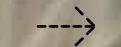
With big business **on board**

The environmental challenges cannot be overcome by activism alone, says Nina Jensen. World-class expertise in the petroleum sector must also be utilised.

*Nina Jensen, REV Ocean.
(Photo: Anne Lise Norheim)*

THE
INDUSTRY'S
FUTURE
CLIMATE

8 DIALOGUE
PSA 2021



DIALOGUE 9
PSA 2021

As CEO for the REV Ocean initiative, Jensen talks enthusiastically, torrentially and readily about the big scenarios and the challenges everyone faces.

She touches on the future winding-up of an industry, but the primary focus is on changes and solutions. Her message is crystal-clear:

“The petroleum sector must transform into a wholly renewable system. Otherwise the accounts won’t balance.”

She is irritated by the signals from Norway’s new coalition government headed by Labour’s Jonas Gahr Støre about *developing, not winding up*.

A halt to offshore exploration would send a clearer signal to the industry about faster change. Because that must happen urgently, she maintains – but admits it will not be simple.

“I don’t envy the oil company leaders or the politicians who will have to take these decisions, but the science is clear about what needs to be done.”

She is pretty sure that most people will be greatly opposed to running down the oil industry, particularly because of the economic consequences.

GLOOMY Jensen paints a gloomy picture of the present position: “We’ve already produced far more fossil energy than the planet can cope with. We’re heading for a temperature rise of 2.7°C, while the ambition is 1.5°C. That doesn’t add up.”

But she nevertheless calls herself an optimist, because Norway’s experience as an energy nation will be worth its weight in gold during the coming transition.

And it will, in her view, be achieved. She lists offshore wind power, CCS, emission-free production of hydrogen and ammonia, and battery manufacture as sectors much in demand.

“We can deliver these with the oil and gas

industry as a key piece in the puzzle,” Jensen affirms. “But something must be done now.”

That means she is unhappy about the signals from both the Støre government’s policy platform and November’s climate summit in Glasgow.

“This won’t do. It’s hollowed out and shows that policy-makers have fundamentally failed to understand the problem.”

But Jensen is far more positive about the attitude of Norwegian industry. Her impression is that climate and sustainability are high up the list of priorities for virtually every top executive in almost all sectors.

GOAL REV Ocean was established by Norwegian businessman Kjell Inge Røkke in 2017 with just one goal – to make the world’s oceans healthier. The main priority for this non-commercial company is ending plastic pollution, overfishing and global warming.

A marine biologist by training, Jensen headed WWF in Norway before being offered her present job by Røkke three years ago. She took a long time to think about it.

“But if there’s something I’ve become more and more convinced about, it’s that people like Røkke will come to change the world,” she says.

In her view, much of the answer lies with the big industrial players. But she admits that her move to Røkke’s Aker group prompted fairly strong reactions in the environmental movement.

“But that soon blew over. I think many now regard this as a sensible choice,” Jensen reports.

“There are those who undoubtedly think it’s safer and better to be just a green activist, and that I’ve taken a dangerous path. At the same time, a lot of people see that we must join forces with big business to achieve noticeable results.”

SERIOUS Jensen believes the most important priority right now is to save the oceans, and she describes the position as serious.

“Over our lifetime, we’ve lost 40 per cent of life in the sea. And this is escalating as a result of overfishing, climate change and plastic pollution. We’re now entering one of the most important decades in the history of the planet.”

REV Ocean is currently working to create specific solutions for improving conditions in the world’s oceans. One measure or industry it wants to back is kelp cultivation.

According to Jensen, this offers opportunities for combined use with offshore wind power and for creating seaweed growth sites around redundant offshore platforms.

Both natural and farmed kelp bind CO₂ and yield a net reduction of this gas in the atmosphere and the upper layer of the oceans. It can be used for food, animal feed, medicines and clothing.

OPPORTUNITIES Jensen admits that too little is known about the potential profitability of kelp farming. But research is being done, and she believes big opportunities exist to develop a business which can also make an important contribution to the climate solution.

However, her faith in seabed mining is correspondingly small. “This is one of the worst imaginable activities you could introduce now. There are no good arguments for starting on it.”

She worries about the impact which extensive extraction of seabed minerals could have on ecosystems, and fears that such activities could be disastrous for life in the sea.

LEARN Jensen is quite convinced that offshore wind power will play a key role in tomorrow’s energy provision, but emphasises the importance of learning from errors made with this energy source on land.

Environmental considerations and safety must be handled in such a way that they bolster trust among people, who are undoubtedly unaware of the challenges involved.

“Overcoming these issues must be the most important job before we go ahead with this. Oil and gas operations have given us nearly 50 years of experience with environmental and safety aspects of work on the NCS. We must take that expertise with us.”

SOLUTIONS She hopes a future is looming where renewable energy is making formidable progress, and good solutions have been found for storing energy in batteries.

The world will hopefully then be cleaner, more renewable and more circular, with resources being looked after and reused. But is such a prospect realistic?

“It ought to be, at least,” Jensen says, but admits such a development is fairly optimistic. It assumes that everyone stops pigeonholing each other, and that all positive forces pull together both in the environmental movement and in business.

“This is where the solution lies,” she believes. Together with all the expertise built up during Norway’s oil age. ★



BY OLAV HOVE

Facing the dilemmas

A future exists for oil and gas, but those companies allowed to take part in this sector will face clear demands, maintains Espen Kvilekval at Norway's DNB bank.

Concern for the environment and sustainability will be preconditions for participation, in the same way safety already is," the banker maintains.

He usually has a view over the whole of Oslo from his 17th-storey office in the city centre. But mist hangs over the capital today, and its periphery is difficult to distinguish.

In many respects, this external outlook serves to reflect the way Kvilekval views the future – there are many grey areas.

"It can be difficult to manoeuvre in the many scenarios," he observes. "Things are constantly changing, and complexity increases year by year."

While finding it hard to predict, the man with global responsibility for oil and gas at DNB lists qualities he is certain companies must possess to succeed in the time to come.

"They must take sustainability seriously. They must analyse and understand how the world is developing, and position themselves accordingly. And they must create trust.

"That trust must extend out to a wide group, to shareholders, to ordinary people, and not least to the younger generation which is due to enter the labour market."

No small job, in other words. But Kvilekval believes that preconditions in Norway are the very best for a great many companies to manage exactly this.

CHANGING He joined DNB from the Ministry of Petroleum and Energy in 2001. Over the 20 years since then, the bank's social mission has been constantly changing.

"As the largest banking and financial institution



"We in Norway are incredibly well placed to succeed with the transition," says Espen Kvilekval in DNB. "We have well-developed safety standards, a good regulatory regime, massive technological expertise, adaptability and a large capital base." (Photo: Anne Lise Norheim)

THE
INDUSTRY'S
FUTURE
FINANCE



Net zero by 2050. The IEA's roadmap for global zero emissions at mid-century. This report shows that the goal is attainable, but calls for very ambitious action – including a total restructuring of the world's energy system.

in Norway, we have a duty to work strategically and dynamically with that mission," he explains.

For him, this is about trying to keep abreast of developments. In recent years, sustainability has become an integrated part of all business activities – which poses several major dilemmas.

"One example is provided by the petroleum sector, where a big need is seen to cut greenhouse gas emissions and change the energy system," he notes.

Kvilekval lists several events in 2021 which have illustrated the seriousness of climate change, including the International Energy Agency (IEA) roadmap for global net zero emissions by 2050.

Others are the new report from the UN's inter-governmental panel on climate change (IPCC), described by secretary general António Guterres as "code red for humanity", and the climate summit in Glasgow.

"At the same time as all this, we see a big world need for energy," Kvilekval says. Globally, 850 million people have no access to electricity.

Pressure on the power system is so great in many places, such as China, India and Lebanon, that the grid collapses from time to time. And UK gas prices increased sixfold this autumn.

"In other words, we see a large and growing demand for secure energy supplies around the world as well as a big need for transition. That's one of the greatest dilemmas of our time."

UNDERINVESTED He believes that much of the problem derives from underinvestment in the energy sector over a number of years, and says it will be important to have several ideas in one's head simultaneously.

"DNB's ambition is that our finance and investment business will cause net zero emissions by 2050, and it's important for us to be involved in financing renewable energy.

"On the other hand, this is also a matter of not shutting out industries – as some banks have done in the case of oil and gas companies."

The question then is whether that will be possible. After painting such a serious picture of the world's climate status, is continued investment in petroleum acceptable.

"For our part, this is about conducting a good conversation with the companies," Kvilekval explains. "It'll be important, for example, that oil firms also invest in renewables. We can then be a partner.

"In circumstances where demand for oil and gas is record-high, it suits us well to be able to influence and support our customers so that they produce as sustainably as possible."

MORALS Many different forecasts exist about the profitability of new energy forms. The question which then arises for a banker is what ranks higher – morals or profits?

"These two considerations don't necessarily conflict," responds Kvilekval. He compares the focus on sustainability with safety requirements on the NCS.

"Tough standards for this were set fairly early on. Safety became a prerequisite, and still is. You then naturally have to ensure profitable operation. But it must be clear that nobody will accept anything which is less safe."

He believes concern for the environment and sustainability will be preconditions for pursuing offshore activities, just as safety already is.

"Virtually all the companies are well aware of this. Sustainability requirements aren't controversial – rather the opposite."

TRANSITION From his perspective, perched high above Oslo, Kvilekval sees big opportunities in the energy transition now under way.

"A huge amount is happening in the energy field today. We're hearing a great deal from

companies which want to create something new and to be a driving force for change."

In his view, a trend can be seen in Norwegian business today where people are looking to the future and focusing on the opportunities far more than they did a few years ago. Attention then was more on preserving what already existed.

ADDITION Kvilekval points out that, historically, the world has seen little energy *transition* but rather energy *addition*. New forms have emerged alongside existing ones and absorbed demand growth.

"I believe most in diversity," he says. "We'll need many different forms of energy for a long time to come. But things must now be phased out – starting with coal.

"And that needs to be done intelligently. We see many users dropping coal, and a number doing the same with nuclear power, without alternatives in place. So electricity and gas prices have shot up."

Kvilekval makes it clear that the expertise found in the oil and gas sector must play a leading role, and that this must be given political backing.

"A great many of the new commitments are on the starting blocks, and the risk is great. So we need the state to provide good operating parameters."

NEVER BETTER "In many ways, the world has never been a better place to live in," Kvilekval says. "We must bear that in mind when talking about prospects which frighten us.

"The years to come will be demanding, but we in Norway are incredibly well placed to succeed with the transition.

"We have well-developed safety standards, a good regulatory regime, massive technological expertise, adaptability and a large capital base.

"Few counties are so fortunate. We're lucky, and ready for the restructuring." ★



BY OLAV HOVE

Ironing out the paradoxes

With the ice melting and the temperature rising, taking pride in being an oil worker is challenging. Union leader Stig-Rune Refvik believes the future will be about balance.

"Maintaining the level of offshore safety, regardless of activity, is crucial," says union official Stig-Rune Refvik in Safe. (Photo: Jonas Haarr Friestad)

THE
INDUSTRY'S
FUTURE
EMPLOYEES



At his office in Stavanger, Refvik shakes his head over his own responses to the questions he is being asked.

He finds them overly diplomatic and flaccid, and would have preferred to express clearer and more categorical prophecies. But too much is involved for that, too many aspects must be balanced.

A senior official in the Norwegian Union of Energy Workers (Safe), he finds the current status of the industry paradoxical.

On the one hand, it is experiencing high oil and gas prices and great activity. On the other, the UN secretary general has declared code red for humanity.

“We’ve no problem producing oil and gas which meets the ever-rising demand,” Refvik affirms. “But unless the climate aspect is taken care of, there’s sort of no point.”

RESERVATIONS He is an optimist with reservations, and sees much that needs to be in place before he can lean back and give a thumbs up for the energy sector’s future.

One requirement is striking a balance between producing hydrocarbons while nevertheless being sustainable. Another is how to work together to find solutions for tomorrow’s challenges.

“We already have a number of collaborative

arenas for employers, unions and government, where good and constructive conversations cover many aspects and areas,” says Refvik. “And that’s positive. But a lot needs to be done.”

He lists a number of things which have to be in place from his perspective: more arenas, room to listen to everyone’s views, and a liberal attitude.

“And this must be based on facts. We need to listen to the experts. That’s the core.”

POSITIVE Refvik also identifies much which he finds positive, and is convinced that the key to tomorrow’s energy solutions lies in the expertise of the oil and gas industry.

As a result, he has no hesitation in recommending a career in this business to young people. “An education in and experience from today’s petroleum industry will make you a proud energy worker in the future.”

ACTIVITY So what is needed to safeguard oil jobs while maintaining the balance mentioned above? Refvik believes that a high level of activity on the NCS is a prerequisite for “saving” the world.

“We must put CCS in place. The environmental benefit is so big that it’s a precondition. We must then think solar, offshore wind and other energy forms.

“In this picture, however, we need a capital

base – and that’s why oil and gas production must continue.”

He is frustrated by the public debate on sustainability. “People here talk almost exclusively about fossil fuels and emission cuts. And that’s important. We must act in this area.

“But we must also be allowed to comment on India and China without being slated as irresponsible. We must obviously do our bit, but the climate is a collective, universal responsibility.”

He also emphasises the importance of economic muscle in developing new technology, and is therefore pleased that the new government’s policy platform talks about developing rather than winding up the oil and gas sector.

“This includes being able to back Sintef and the Norwegian University of Science and Technology [NTNU] in researching CCS and new energy forms. We have every opportunity to be in the driving seat for technological innovation.”

PERSPECTIVE Refvik has worked with HSE for many years and in different arenas, and the safety perspective is always present – not least when talking about the future and new players on the NCS.

He makes it clear that the need for good operating parameters from the politicians is not confined to the climate side.

“Maintaining the level of offshore safety, regard-

less of activity, is crucial. They must talk together, and listen to public opinion. We must be synchronised with the rest of society.

“In this respect, the PSA with its expertise plays an important role. Views differ over which energy forms should be pursued, but let the PSA keep its hands on the safety wheel.”

WELL “If we get what we want, this will go well,” says Refvik, before smiling at his own statement.

“Let’s continue to produce oil and gas, so that we’re equipped to achieve the necessary technological boost. The world will then be greener.

“In addition, we must get CCS in place as soon as possible. And those of us who work in the industry must have an important voice when new energy forms are to be developed and introduced.”

He says that will lay the basis for a new industrial adventure in the North Sea, and Norway can look forward to a positive future.

“And we then need more specialists on the front pages. We must listen, read and be enthusiastic about everything which is happening and going to happen in this sector.” ★

BY ØVIND MIDTTUN

Headed for new horizons

Knowledge and expertise from the petroleum sector are important for the energy transition and for building up renewables such as offshore wind power.

The PSA has already acquired new areas of responsibility and is ambitious for more.

"Our expertise lies in supervising industrial energy activities – both offshore and at land-based plants," observes PSA director general Anne Myhrvold. "We'll be taking this with us into new areas."
(Photo: Tommy Ellingsen)



We have unique understanding of and experience from regulating safety in the petroleum sector," observes Anne Myhrvold, director general of the PSA.

"Our expertise lies in supervising industrial energy activities – both offshore and at land-based plants. We'll be taking this with us into new areas."

The oil sector is changing, with technology and skills from this industry being applied to such fields as CO₂ management and offshore wind power.

"We're seeing many companies in the petroleum sector undergo structural changes to become integrated energy businesses which also embrace renewables," observes Myhrvold.

This transformation means a natural enlargement in the PSA's area of supervisory responsibility, she notes.

"We've already been put in charge of safety and the working environment for carbon transport and storage and for renewable energy at sea, where offshore wind power is the most relevant candidate today.

"Our responsibility is to define the parameters for pursuing these activities in a prudent manner, and to follow up that this is being done."

OPENED "We see changes starting to happen for offshore wind power," Myhrvold reports. "The government has opened the Utsira North and Southern North Sea II areas for such activity."

With the industry pursuing this opportunity, it is important to put in place good and well-functioning regulations for safety and the working environment, she emphasises. These must be tailored to the risks related to this form of power generation.

"We're committed to helping create predictability for offshore wind power players. We have long experience of developing regulations both offshore and on land."

She adds that the PSA has broad expertise with risk conditions relevant to the new industries, and urges the sector to take a united approach to its restructuring.

"We're working now in the Regulatory Forum to establish a common starting point for developing regulations on offshore renewable energy.

"It's important that all sides engage in that work, so that we end up with a good regime and appropriate regulations for this area as well."

OVERALL The energy White Paper presented by the Ministry of Petroleum and Energy in June ranked as the first policy document of its kind to take an overall look at further development in this area.

It outlined opportunities for long-term value creation from Norwegian energy resources. A key argument was that knowledge and expertise from the petroleum industry are important and must be applied in developing and building new energy activities.

"The White Paper emphasises that Norway will make continued use of experience and relevant lessons from the oil and gas sector," says Myhrvold.

"Safety work also occupies a key place here. We have a role in the green shift.

"Where we're given responsibility, we'll ensure well-functioning parameters as well as competent and clear supervision. That'll contribute to good and prudent operation of both the transition and new industrial activity." ★



BY OLAV HOVE

Taking responsibility for change

The future is about being able to keep several thoughts in your head at the same time, says Ståle Kyllingstad, chair of the Federation of Norwegian Industries and founder of IKM. That is something he is pretty used to doing.

*"The PSA has done a good job of organising the NCS and setting the terms for safety," says Ståle Kyllingstad.
"It must continue doing that. We as an industry can't be burdened with several regulators." (Photo: Tommy Ellingsen)*

Im convinced we'll be producing oil and gas throughout this century," Kyllingstad says. "But having put NOK 12 000 billion in the bank from hydrocarbon extraction must have consequences. So we in Norway have a special responsibility."

The words quickly flow faster when he is asked about the future for the petroleum industry. He does not believe in any abrupt downturn in production – rather the opposite.

"We currently have 93 fields on stream off Norway, and I predict we'll be up to 110, perhaps 115, before that goes into reverse."

He also believes that continued growth is appropriate, and does not accept that he is failing to take the environmental challenges and the UN's code red seriously.

"So many facts disappear in this debate," he says, and points to the new Baltic Pipe facility intended to supply Poland with Norwegian gas.

"This project will allow the Poles to reduce emissions by 50 million tonnes of CO₂ per year – more than Norway's annual total. We hear little about that, which is a pity."

FOOTPRINT Kyllingstad describes an industry which is working flat out to reduce its carbon foot-

print. "We must accept our responsibility and help the rest of the world," he says.

He is therefore pleased with the new coalition government's policy platform, and feels it outlines a sensible approach with stricter environmental standards and a gradual rise in CO₂ tax.

"Increasing the latter is a good and necessary step," he affirms. "It will force the industry to come up with solutions for reducing emissions."

OPTIMISTIC The trend he now sees makes Kyllingstad optimistic. He points first and foremost to offshore wind power and CCS as areas which have come far, and which he has most faith in.

"It's important to get going with CCS in Norway, since this could be a big part of the solution to a global problem."

He notes that the country has the infrastructure in place and substantial expertise from the oil and gas sector, which means that CCS could be profitable, employ many and make a very important environmental contribution.

WIND "We must devote a lot of time, resources and money to developing offshore wind power, where much is to be gained both financially and environmentally," Kyllingstad adds.

He believes in this becoming potentially a substantial industry in Norway, with many different players and solutions on tomorrow's NCS.

While noting that the big traditional oil companies are moving out of the Norwegian oil sector, he sees a number of new energy companies on the way in.

"That's exciting, but it's more important than ever that we now have a common set of regulations to guide us. That's the basis, it must be put in place.

"The PSA has done a good job of organising the NCS and setting the terms for safety. It must continue doing that. We as an industry can't be burdened with several regulators.

"If necessary, the PSA should rather change its name to the Norwegian Energy Safety Authority or something along those lines."

UPHEAVAL Where his own IKM group is concerned, Kyllingstad is reasonably satisfied. He sees that the supplier sector faces an upheaval, but is optimistic.

"The Norwegian oil industry will be gradually cut back before flowering again when we get properly going with offshore wind power and CCS," he says. "But we're in a time of change, and the level of activity will be lower for a period."

Kyllingstad believes change, new players and running down will have a positive impact on companies like his. He does not think particular areas will be especially profitable, but believes that the ability to offer a breadth of services will be favourable.

PREDICTING Kyllingstad has no problems in making energy predictions, and notes that the world currently consumes about 99 million barrels of oil per day. That will be down to 40 in two decades.

"We're being measured today and tomorrow by point emissions. Change will be driven by consumers in cooperation with the politicians and the industry.

"So it's quite clear that we'll see new green energy forms flourish and expand strongly. And I believe nuclear power is set for a renaissance in countries like Sweden and France."★

To the point

Since 2017, the PSA has adopted an annual main issue with the aim of influencing debate and the industry's safety priorities. But why does it think this is necessary?

Safety work in the petroleum industry is a complicated business, to put it mildly. The complexities of discovering and producing oil and gas are as great as the responsibility of the companies to do the work as prudently as possible.

Reducing risk for people, the environment and material assets is the most important goal of safety work. At the same time, the companies must ensure a good working environment – in the widest sense – for their employees.

For its part, the PSA *helps* to ensure that companies and players take responsibility for safety and see to it that constant progress is made in this area.

It does this through audits and by developing and enforcing the regulations. Easy to say, but not to implement. The petroleum industry is anything but simple.

INFORMATION The PSA acquires large volumes of information from the companies and the industry, and analyses, debates and evaluates these data in many, long and demanding rounds.

That leads ultimately to an audit programme for the year – what *must* be looked at more closely, what *should* be got to grips with, and what is *less* pressing.

Tough priorities underlie the conclusions reached. And priorities, of course, are as much about what is excluded as what gets included. That means difficult choices.

Every year, however, the PSA opts to highlight an issue and a headline which it asks the industry to pay special attention to at an overall level.

That main issue is naturally also the outcome of an extensive process. For once, however, the result is straightforward – and easy to communicate.

Presented every autumn, one brief text sums up an issue which the PSA wants the industry's leaders and decision-makers to address in particular depth and to take the necessary action on.

That is because this short message encompasses some important and complex challenges which must be overcome and which are fundamental to maintaining and improving a high level of safety.

And *that* is the main issue. ★



Photo: Anne Lise Norheim.

Six years of main issues

- 2017 Reversing the trend
- 2018 Valuing safety choices
- 2019 Safe, strong, clear
- 2020 Never another major accident
- 2021 Side by side with the suppliers
- 2022 Capacity and competence – the key to safety

Definitive decree

The legal basis for establishing the PSA in 2004 was the Crown Prince Regent's decree of 19 December 2003. This established the principles for the way the authority should perform its duties.

“The PSA will set the terms for and follow up that players in the petroleum industry are maintaining a high level of health, safety, environmental protection and emergency preparedness, and thereby also help to create the greatest possible value for society. The follow-up will be system-oriented and risk-based. This follow-up will be a supplement to, and not a replacement for, the follow-up of its own operations conducted by the industry itself. A balance will be struck between the PSA's roles as a high-risk/technology authority and a labour inspection authority. Worker participation and collaboration between the parties form important preconditions and principles for the PSA's activities.”



Main issue 2022

Capacity and competence – the key to safety

The PSA sees with concern that capacity and competence are identified as nonconformities in a large number of its audits – at operators and licensees, in large companies and small.

Conditions related to this aspect have also been contributory factors in a number of serious incidents over the past couple of years. The availability of well-qualified personnel is a particular challenge among suppliers.

This position is worrying. The future of the industry will be characterised in part by ageing infrastructure, automation, the introduction of new modes of operation, and projects related to new forms of energy.

Safety in an increasingly complex sector can only be ensured through a competent labour force and good manning levels.

The PSA would urge company decision-makers to pause and carry out a detailed assessment of the position in their own organisation. Success is fully possible with good management. ✪



BY EILEEN BRUNDTLAND

Good teams utilise the best

The PSA put suppliers and their operating parameters at the top of the agenda with its 2021 main issue of “side by side with the suppliers”. This will remain important far beyond a single year.

Head of supervision Ingvil Tveit Håland (left) and company contact Aina Eltervåg play key roles in following up suppliers at the PSA. (Photo: Anne Lise Norheim)



We've been working on the role of suppliers for years," says Ingvil Tveit Håland, who heads the PSA's follow-up of these companies – which include fabricators and contractors.

"This was adopted as our main issue in 2021 both to highlight their own responsibilities and to emphasise that this part of the industry needs good operating parameters to work safely.

"That's important for maintaining and improving the level of safety in the industry. 'Side by side with the suppliers' emphasises that the sector has a common responsibility to ensure a strong and viable supplier side."

OVERVIEW "Meetings with a large number of suppliers have given us a good overview of which parameters are important and how these have changed over time," explains Tveit Håland.

"We've also established what consequences such changes could have – particularly for HSE. That's valuable in understanding where the problems are at industry level."

The PSA has also conducted audits focused directly on supplier companies during 2021.

"Such checks are important for ensuring that all the companies play by the same rules," says Tveit Håland. "That benefits both the supplier sector and the industry as a whole."

Nonconformities identified by these audits show that excessive pressure on operating parameters can contribute to companies breaching the regulations, she observes.

"A link may exist between nonconformities at suppliers and the parameters set by the operators. That's something the latter must be aware of.

"While the suppliers have an independent responsibility to comply with the regulations, important conditions for their activities are determined by others."

DIALOGUE "Our 2021 main issue was very well received by the suppliers," says Aina Eltervåg, the PSA's contact with these companies. "They've used it as an opportunity for dialogue with the other side.

"It's important for the suppliers to get in gear early with their customers when drawing up contracts. After all, they're the ones who're going to do the job.

"They have much experience and expertise, and want to influence both the risk they face themselves and their possible contribution to risk in the overall activity."

She explains that suppliers want adequate predictability for planning their own staffing. Many face challenges in delivering the right competence and capacity at the right time.

"The parameters set by customers have direct consequences for working conditions at the sharp end. We expect contracts to ensure prudent terms so that suppliers can do the work in a safe way."

Eltervåg emphasises that operators have in many cases established good collaboration with their suppliers. The latter then become involved early in the planning process and are able to provide input for secure and efficient solutions.

"Both sides can then benefit from each other's expertise, pull together in the same direction and – most importantly – find that they have something to gain from the collaboration.

"Viable suppliers are a precondition for tech-

nological progress. To succeed with that, both customer and supplier must be able to think long-term."

ATTENTION Tveit Håland promises that the PSA will be continuing to devote attention to the supplier companies in the time to come.

"We believe we're also side by side with them when our audits of their work identify regulatory breaches, and we'll continue to check such aspects as temporary hires and working hours.

"This is about uncovering specific illegalities at individual companies, but it's equally important to turn the spotlight on the underlying causes."

She explains that terms set for contractor operations have direct significance for safety. Challenges related to such aspects as planning horizons, capacity and competence affect the whole industry, and the contractors cannot overcome them alone.

"The level of activity in the industry is now shooting up, with pressure growing to secure well-qualified personnel.

"That's particularly evident among suppliers, and it's important that we manage to retain expertise in this sector. Their operating parameters therefore play a crucial role." ★

Suppliers have an independent responsibility to comply with the regulations, but important parameters for their activities are determined by others. (Photo: Anne Lise Norheim)



Initiative with real effect

The PSA has highlighted the significance of supplier companies for safety in Norway's petroleum sector. Trade unionist Kine Asper Vistnes believes this 2021 main issue has already had an impact.

It's important that interaction between suppliers and operators is on the agenda because the former comprise many players, who're often at the mercy of customer priorities," she says.

Vistnes is a senior official in the United Federation of Trade Unions which, as Norway's largest union in the private sector, has many members at oil-industry suppliers.

Commenting on the PSA's main issue of "side by side with the suppliers", she says the union is already seeing more awareness among companies about adopting the necessary protocols for worker participation.

"That's directly related to PSA audits and the great emphasis among the regulators on such employee involvement. Local employer-union collaboration must function properly and develop further, and the PSA's influence makes a positive contribution to this.

"The fact that it has been given the authority to supervise temporary hires and equal treatment both on the NCS and at land plants has also created great optimism."

SUPPORTER Vistnes emphasises that the United Federation is a strong supporter of the oil industry, and that the high level of expertise among its parties is a precondition for the green shift.

However, the unions have clear expectations that the operator companies and the suppliers will succeed in collaborating well in the future by sharing information on good measures which benefit all.

"It's traditionally been the suppliers who've provided the operators with good expertise," Vistnes points out. "This must be maintained, with good operating parameters for the supplier sector.

"That'll allow its members to continue investing in expertise and taking on apprentices. Tomorrow's



Kine Asper Vistnes (Photo: United Federation of Trade Unions)

industry must be developed from today's, and predictability is important for that."

LONG-TERM The United Federation wants to help ensure good policies for the oil industry, but expects a pay-back in the form of a long-term perspective.

It now sees new issues, with oil and gas prices high and activity rising. "The cyclical nature of the industry is challenging, even if earnings are good for now," says Vistnes.

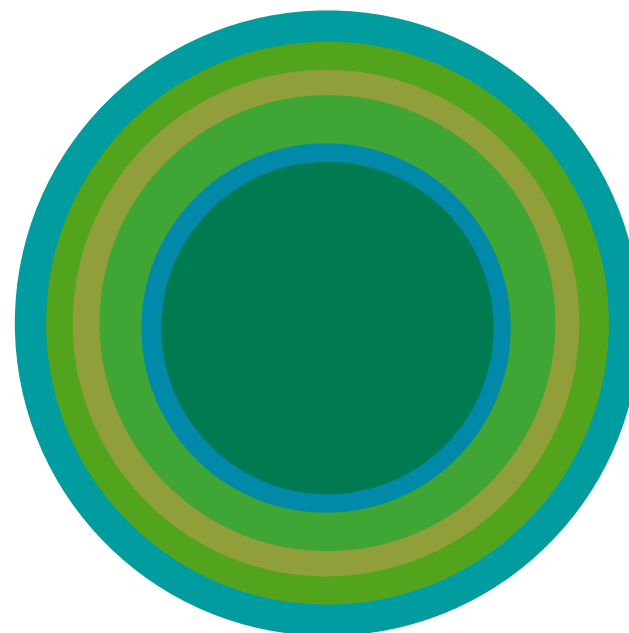
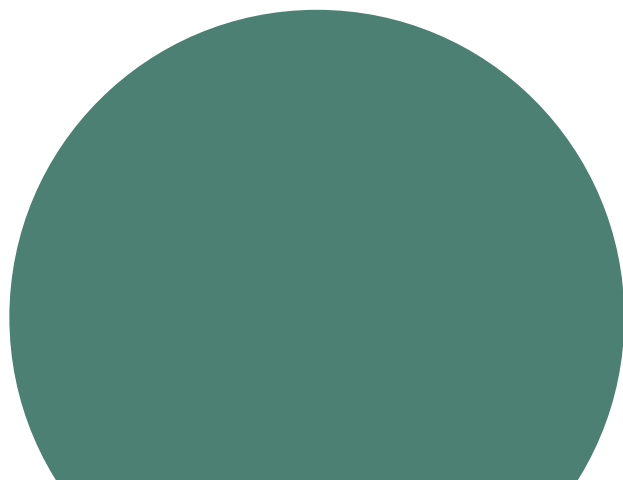
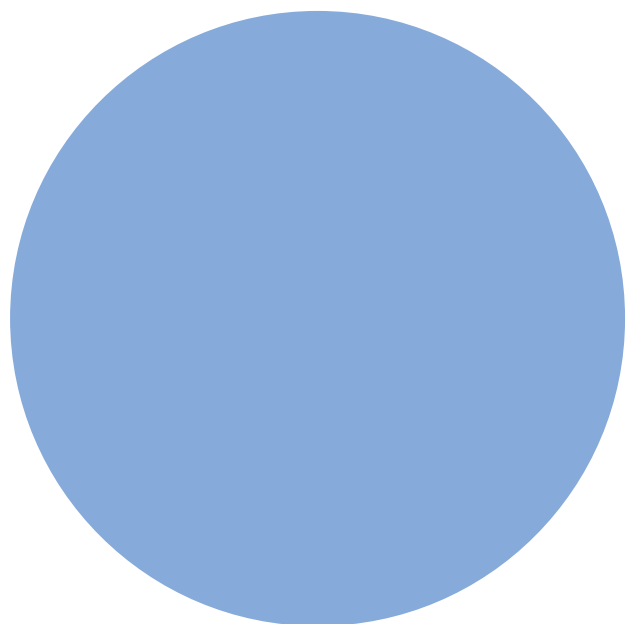
"Good HSE work, more permanent jobs and fewer temporary hires will be key issues for the future. Temporary staffing must be utilised in a controlled manner.

"We've seen cases of unfortunate solutions in the supplier industry, which have been exposed by the PSA through a couple of audits."

According to the United Federation, collaboration between employers, unions and government provides the best basis for achieving long-term solutions and a good green transition.

"An even greater commitment to staffing and the right expertise is important for the future," Vistnes emphasises.

"Collaboration between all sides is always a good basis for achieving positive long-term solutions for HSE work, expertise development and staffing strategies." ★



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CCS: Carbon capture and storage
HSE: Health, safety and the environment
NCS: Norwegian continental shelf
PSA: Petroleum Safety Authority Norway

