

# Annual report

Northern Lights | 2021

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# Chair's message



“Northern Lights is a **catalyst** for CCS in Europe.”

Dear climate optimists,

For Northern Lights, 2021 was the year it really kicked off. In January, the Norwegian Parliament unanimously agreed to support the Northern Lights CO<sub>2</sub> transport and storage infrastructure development, following a decision by the Norwegian government at the end of 2020. The Northern Lights Joint Venture was then established and incorporated in February 2021, our three owners having taken their final investment decision in May 2020.

I had the pleasure to formally assume the role as Chair of the Company as the JV was incorporated. The governance structure had already been agreed through a partnership agreement and the first duty of the Company Meeting was to appoint a team. Børre Jacobsen took over as Managing Director with a highly competent leadership team around him. Together we developed an ambitious long-term strategy plan.

Our strategy builds on the fast-growing interest in carbon capture and the demand for storage capacity as companies and countries across Europe start to implement their net zero strategies. For Northern Lights this growing market demand in Norway and across Europe is a huge opportunity, since it is impossible to achieve the world's climate goals without this technology.

Northern Lights is the first of its kind and has been a catalyst for the interest in CCS in Europe. There is significant interest in its services and the company is positioning itself to receive CO<sub>2</sub> from different sectors that are looking to Norway for storage capacity. With such positive market signals, we have decided to study a possible expansion of the Northern Lights infrastructure to enable transportation and storage of over 5 million tonnes of CO<sub>2</sub> per year. Our ambition is to increase capacity further still as demand grows across Europe.

“Our focus is on building market **confidence** through strategic **progress** and technical **performance**.”

The Company Meeting is unanimous in its support for this course of action, which will help establish Northern Lights as a market leader in Europe.

As we turn to 2022, the focus of the Company Meeting is on supporting Northern Lights’ leadership team to deliver on the strategy, and on building market confidence through strategic progress and technical performance.

Despite COVID-19-related practical challenges, our staff, service providers and contractors have maintained good progress on delivery of the commercial plan, subsurface maturation, and project delivery. As technical service provider, Equinor is managing delivery of the onshore and offshore facilities. This has been done without significant safety related incidents. That is a testament to their careful work.

This journey has just begun. While it will require patience, our goal is that Northern Lights over time will bring significant benefits for society.

We know that the journey to net zero is, in part, one of discovery. For that reason, the Northern Lights Company Meeting and leadership team aim to remain fully open to advice, learning and challenge.

I would like to thank the Managing Director, his leadership team and everyone working to realise Northern Lights, as service providers and contractors, for their hard work during 2021. Throughout this exciting but challenging year, they showed incredible enthusiasm and determination.

**Grete Tveit**  
**Chair, Northern Lights Company Meeting**

# Managing director's message



“Northern Lights  
is a **first of a kind**  
solution.”

Dear stakeholder,

The drive to deliver on the Paris Agreement objectives has intensified in the last year. Governments, corporations and the general public are unified around the commitment to meet net zero emissions around 2050. Commitments are good, but we need more than that. Plans must be put in place to deliver on these commitments. Government policies, international co-operation and funding matter, and Northern Lights is playing a pioneering role in each of these areas.

Northern Lights is the transport and storage component of the Longship project, promoted and supported by the Norwegian State, which includes capture of CO<sub>2</sub> from two industrial point sources in eastern Norway. When we start operations in 2024, Northern Lights will be the first ever cross-border, open-source CO<sub>2</sub> transport and storage infrastructure network, offering companies across Europe the opportunity to store their CO<sub>2</sub> safely and permanently deep under the seabed.

The solution is building on knowledge and experience from the oil and gas industry, its highly developed supply industry and the maritime sector. Among our staff members we have experienced geologists, geophysicists, reservoir engineers, drilling engineers and other specialists with the skills and capacity to develop safe and cost-effective CO<sub>2</sub> storage solutions.

As a first of a kind solution, Northern Lights aims to share its knowledge and experience with research institutions, academia, other companies and government authorities, contributing to the further development of CCS and safe CO<sub>2</sub> storage globally.

Carbon capture and storage is an integral part of our owner companies' strategies. We deliver on this strategy by offering CO<sub>2</sub> transportation and storage as a service – working with customers in Norway and the rest of Europe and across sectors to help the transition to net zero emissions.

“For CCS to become a successful **climate mitigation** measure, our **business model** needs to be successful.”

While we rely on a sound commercial model to secure the long term, it is the market that will determine if our efforts are successful. Northern Lights is in discussions with potential customers around Europe, whose emissions represent more than the annual emissions of Norway, and more than is currently stored worldwide.

In the next year we hope many of these discussions will turn into firm commitments. When they do, we will be ready to increase our storage capacity. We are already looking at increasing our capacity from 1.5 to over 5 million tonnes per year in a second development phase and will consider development of additional capacity in line with market demand.

The Global CCS Institute reports that the project pipeline has never been bigger. But for CCS to become a successful climate mitigation measure, our business model – maximising value creation while meeting the rapidly increasing storage demand – needs to be successful.

We have been supported by the Norwegian government to get going and the EU has also supported some of our potential customers and our ambition to expand storage. To scale up, we will need effective support mechanisms, a high CO<sub>2</sub> price, willingness to invest, smart regulations, technical standardisation, and certification and metering standards. Digital innovation will also help drive value creation.

On our part, we aim to demonstrate our ability to compete, add value and deliver on our value proposition: enabling the decarbonisation of industrial emissions in Europe and facilitating the removal of CO<sub>2</sub> from the air.

Thank you for your support.

**Harald Børre Jacobsen**  
**Managing Director, Northern Lights JV**

Part 1

# Company Meeting report

# Company Meeting report 2021

The Company Meeting report is prepared on a voluntary basis, based on the Norwegian Accounting Act § 3-3 a.

Northern Lights JV DA delivers CO<sub>2</sub> transport and storage as a service for industrial process emissions for which there is currently no scalable solution, accelerates the decarbonisation of European industry, and facilitates the removal of CO<sub>2</sub> from the atmosphere.

Northern Lights is the transport and storage component of Norway's Longship project, which includes capture of CO<sub>2</sub> from two industrial point sources in the eastern part of Norway. Northern Lights ships the CO<sub>2</sub> to an onshore terminal on the Norwegian west coast and, from there, transports the liquefied CO<sub>2</sub> by pipeline to a subsea storage location in the North Sea. It will also offer companies across Europe the opportunity to store their CO<sub>2</sub> safely and permanently deep under the seabed in Norway.

When Northern Lights starts operations in 2024, it will be the first ever cross-border, open-source CO<sub>2</sub> transport and storage infrastructure network.

The company's head office is at Byfjordparken 15, Stavanger, Norway. The CO<sub>2</sub> receiving terminal is being built in Energiparken in Øygarden Municipality. Northern Lights will own and operate the facilities once they are operational in 2024.

Northern Lights JV was incorporated on 5 February 2021. On 7 June 2021 it became the operator of Exploitation licence 001 on the Norwegian Continental Shelf (EL001).

Northern Lights JV is an unlimited liability partnership subject to the Norwegian company act. The owners have unlimited liability for their respective shares of the total liabilities. Northern Lights JV's owners are Equinor Refining Norway AS, TotalEnergies EP Norge AS and A/S Norske Shell, all holding equal ownership of 33.3%.

## Financial development

Northern Lights reported a net loss of NOK 81.9 million in 2021. This relates to company administration and preparation for the Phase 2 expansion of storage capacity to allow Northern Lights JV to store over 5 million tonnes of CO<sub>2</sub> annually. Phase 1 development is ongoing and will be operational in the second half of 2024. Capital investment in 2021 amounted to NOK 1,737 million, related to establishment of the onshore and off-shore facilities in Øygarden and ship construction.

The Phase 1 development as well as the first 10 years of operation is supported by the Norwegian State through a State Support Agreement that came in effect when Northern Lights JV became the operator of EL001. In total, Northern Lights JV received NOK 1,233 million in state support in 2021.

Asset removal obligations recorded by end-2021 are related to future decommissioning of subsea templates and plugging and abandonment of exploitation wells.



The owners of Northern Lights JV have supported the company with capital injection of NOK 549 million.

Net cash flow from operating activities is negative at NOK 338 million. This is in all material aspects-related to changes in short term service provider payables. Net cash flow from investment activities is NOK 127 million. This is related to assets under construction and state support received. Net cash flow from financing activities is NOK 267 million mainly resulting from increased capital contribution from owners.

### Business development

Since the incorporation of the company, there has been an increased interest in carbon capture and storage (CCS) in Europe. There was also a sharp rise in the European Emissions Trading Scheme (ETS) price during 2021.

“There has been increased interest in CCS in Europe.”

As a result, Northern Lights JV is currently in commercial negotiations with multiple customers across Northern Europe representing different industries.

In November 2021, four of the potential customers were granted funding by the EU Innovation Fund. Northern Lights JV is aiming to sign its first commercial customer contract in 2022.

### Risks and risk management

Risks are continuously monitored, addressed and documented. Emerging issues are shared with decision-makers and relevant stakeholders. Northern Lights' approach to risk management supports the company's efforts to keep the risks as low as reasonably practicable and to continuously improve operational practice and procedures.

Director and Officer's Liability Insurance will, due to the company structure (unlimited partnership/ delt ansvar, DA) only be applicable for the Managing Director. Director and Officer's Liability insurance for the Managing Director is under review.

### Financial risk

In the development phase, Northern Lights is financed by a State grant and from capital provided by its owners. The company does not have any external financing.

Northern Lights JV is and will be exposed to currency fluctuation. All State support is received in Norwegian Kroner (NOK), but the company has obligations in foreign currencies. Funding received from owners can be requested in the underlying currency. The largest currency exposure is related to the shipbuilding contract of two newbuilds, where a large part of the contract obligation, valued in USD, will be paid at delivery in 2024. Milestone payments linked to the ship contract have been hedged against NOK as of February 2022.

### Health, safety, security and environment (HSE)

Northern Lights JV does not have its own staff. Personnel are either seconded from owner companies or external consultants. Consequently, sick leave is managed by the responsible employer. Work-related incidents are embedded in the Northern Lights HSEQ statistics, including Service Provider (Equinor and Stasco/shipyard) performance. There have been three recordable incidents reported from execution activities carried out in Øygarden. One of these has been classified as a High Potential Incident.

Northern Lights JV has a high focus on HSE within the entire organisation. All employees have conducted first aid and firefighting training during 2021. Environmental performance is continuously tracked and recorded. There has not been any reportable discharge to air or water during 2021.

## Social responsibility

Northern Lights JV has a high focus on ethical behaviour, human rights and the company's total impact on the environment. Carbon footprint criteria have, for instance, been considered in office selection as well as for IT data centre services.

The Northern Lights Code of Conduct is the company's guide to ethical business practice and behaviours. It contains a set of business principles, based on values, beliefs and expectations, requiring that business activities always be performed in an ethical, professional and transparent manner, and always in compliance with the law.

“Northern Lights is a **first** – and we want to make it easy for others to **follow**.”

The Code also reflects how the company values (innovative, dedicated, reliable, and open) are to be put into practice every day, and establishes the standards of prudent conduct that is expected from all employees, secondees, contractors and hired personnel working for and on behalf of Northern Lights JV.

## Equal opportunities and discrimination

All temporary personnel hired to Northern Lights JV are treated equal and have equal opportunities.

Northern Lights JV is an equal opportunity company. The Company Meeting consists of two women and one man as of 31 December 2021. The chair of the Company Meeting is held by a woman. The leadership team consist of 30% women and 70% men.

By year end, 29 persons worked directly for Northern Lights JV, 15 of these were women and 14 were men.

## Going concern

The financial statement for 2021 is prepared under the assumption of going concern. The Company Meeting confirms this assumption. Northern Lights JV company structure means that the owners have unlimited liability for their respective shares of the total liabilities.

Stavanger, April 7th 2022

**Grete Tveit**  
Chair of the Company Meeting  
Equinor Refining Norway AS

**Bruno Seilhan**  
Member of the Company Meeting  
TotalEnergies EP Norge AS

**Syrie Crouch**  
Member of the Company Meeting  
A/S Norske Shell

**Harald Børre Jacobsen**  
Managing Director  
Northern Lights JV DA

Part 2

# Progress report

# Northern Lights - becoming a reality

## An overview

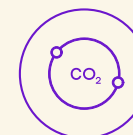
Northern Lights is responsible for developing and operating CO<sub>2</sub> transport and storage facilities, open to third parties, as part of Longship, the Norwegian Government's full-scale carbon capture and storage project. When it starts operations in 2024, it will be the first ever cross-border, open-source CO<sub>2</sub> transport and storage infrastructure network, shipping CO<sub>2</sub> to an onshore receiving terminal at Øygarden on the Norwegian west coast, before being transported by pipeline for permanent storage in a reservoir 2,600 metres under the seabed.

In Phase 1, Northern Lights will provide CO<sub>2</sub> storage capacity of 1.5 million tonnes per year in two wells, taking just over half from two Norwegian sources, Fortum Oslo Varme (waste) and Norcem Brevik (cement), while finding European customers for the remaining capacity. Construction of this infrastructure and the ships began in 2021 and will be completed in mid-2024. It is funded 80% by the Norwegian State.

Funding includes sizing the receiving terminal, offshore pipeline, and the umbilical to the off-shore storage site to accommodate additional volumes.

In Phase 2, Northern Lights will expand capacity to a total of well over 5 million tonnes of CO<sub>2</sub> per year. This phase will be largely commercially funded; funding for studies have already been awarded under the European Union Connecting Europe Facility (CEF) scheme. The ambition is for Phase 2 to be operational by 2026. Due to significant interest from customers, the project plan has accelerated with early investments in wells and infrastructure needed to ensure continuity of service.

### Northern Lights in numbers

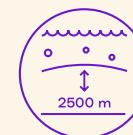


Phase 1: **1.5 million** tonnes of CO<sub>2</sub> per year.

Phase 2: Over **5 million** tonnes (subject to final investment decision)



**100 km** pipeline



Secure geological storage **2,600** metres under the seabed in the North Sea



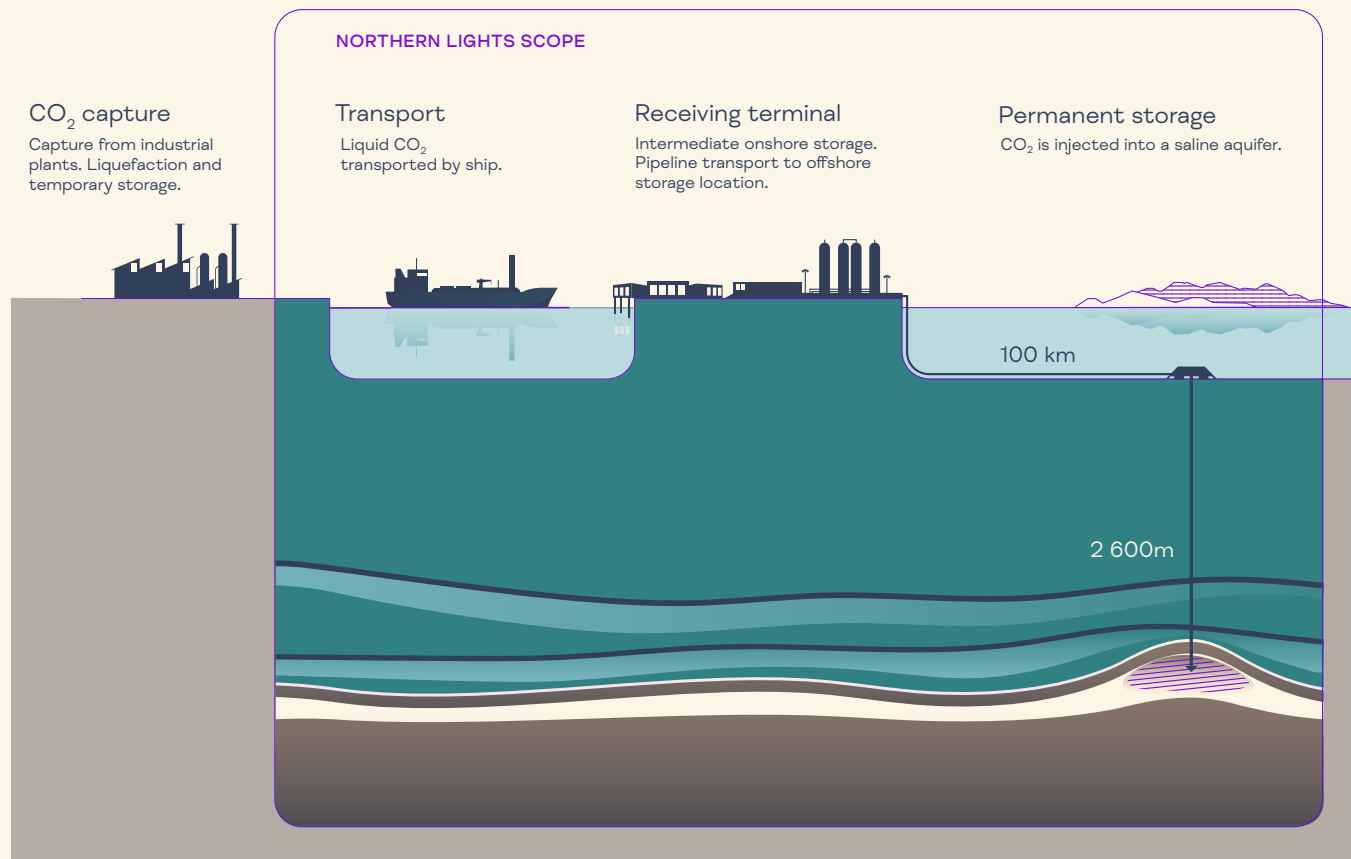
First 2 ships with capacity to transport **7,500 m<sup>3</sup>** of CO<sub>2</sub> each ordered.

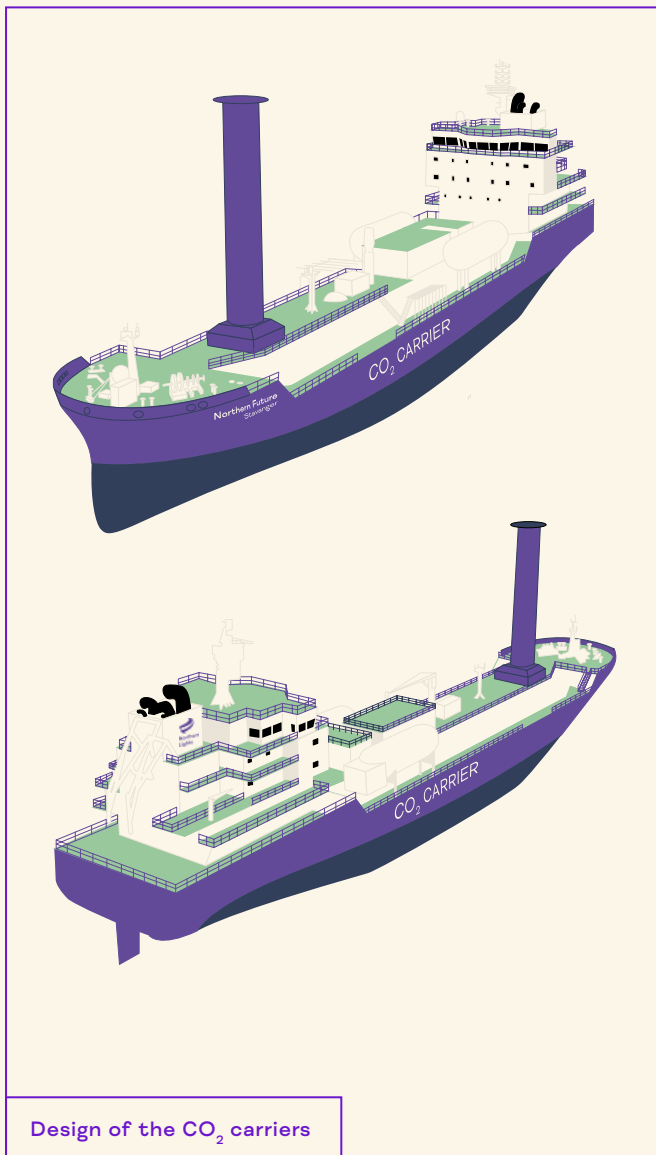
# Progress in 2021

Northern Lights is on schedule to start operations in mid-2024 as planned, enabling a safe and reliable CO<sub>2</sub> transport and storage service to industrial emitters in Norway and from across Europe. It has also started preparing for expansion and developing plans for longer-term growth ambitions.

Progress has been made in all three areas in the Northern Lights scope in 2021:

- CO<sub>2</sub> transport
- Receiving terminal
- Permanent storage



Design of the CO<sub>2</sub> carriers

## CO<sub>2</sub> transport

In October 2021, Northern Lights awarded contracts for the building of two dedicated CO<sub>2</sub> carriers to Dalian Shipbuilding Industry. Each has a cargo size of 7,500 m<sup>3</sup> and a length of 130m, with purpose-built pressurized cargo tanks designed to transport liquid CO<sub>2</sub>. The primary fuel for the ships will be LNG, with a wind-assisted propulsion system and air lubrication to reduce carbon intensity further.

The ships will be delivered in the first half of 2024. As first of its kind, they will potentially set a new standard for CO<sub>2</sub> shipping on coastal trading routes.

In September 2021, Northern Lights participated in the inaugural meeting of the Global CCS Institute Shipping Working Group to share its experience and accelerate the emergence of global CO<sub>2</sub> shipping standards.

A contract for Shipping Execution Supervision was signed with Shell International Trading and Shipping Company Limited (Stasco) in October 2021, where Stasco is a service provider to Northern Lights JV. Detailed engineering will be done at the Stasco office in London and will be completed by November 2022. Work progressed on identifying companies for the ship operating contract and a tender was prepared for the ship operating strategy.

Due to the high demand for CO<sub>2</sub> transport and storage services and in order to satisfy customer needs, Northern Lights is studying ship designs with capacity of up to 12,000 m<sup>3</sup>, in collaboration with the Northern Lights owners.

Northern Lights is part of an industry workgroup convened by the Zero Emissions Platform (ZEP) and CCS Association to address standardisation on CO<sub>2</sub> specifications (composition, pressures, temperatures, etc), as well as ship design and specifications (loading and off-loading, for example). The workgroup is developing a Guidance Note for CO<sub>2</sub> transport by ship which will be published in the first half of 2022.

The Northern Lights owners are working together with Gassco and the classification society DNV to study the development of low-pressure solutions for ship-based CO<sub>2</sub> transportation. The initiative has been named CETO (CO<sub>2</sub> Efficient Transport via Ocean) and is carrying out the technology qualification of a low-pressure ship design and identifying solutions for the scale up of CO<sub>2</sub> transportation volumes, while reducing associated risks.

The Northern Lights owners are also involved in an initiative conducting intensive engineering analysis to formulate an optimum design for the vessels' containment system and cargo handling systems, bearing in mind the specific nature of liquefied CO<sub>2</sub>.



## Receiving terminal

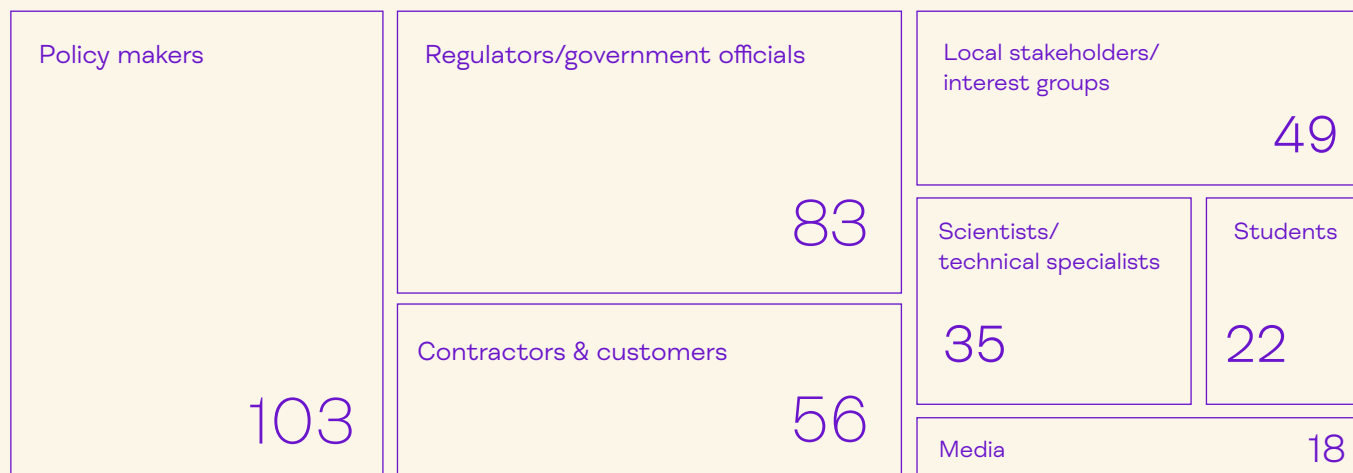
Equinor, as a service provider to Northern Lights JV until the start of the operations, is responsible for the Construction of the Northern Lights onshore infrastructure. The work has progressed well. Most of the site preparation work in Øygarden has been completed and the construction of the import jetty is well under way.

A total of 760,000 m<sup>3</sup> of solid rock has been blasted in 2021. A significant part of this volume has been used to reclaim land in Ljøsøysundet. The remaining rock volume was used for backfill to build up the site to its final design level.

Aker Solutions has proceeded with detailed engineering of the onshore plant, and manufacture and installation will start in the first half of 2022. Manufacture of the umbilical is almost finalised and installation is planned for summer 2022. Line pipe, subsea injection system, subsea valves and fibre optic control cables are being manufactured. Engineering of pipelay is ongoing.

Completion of the permanent operations office and visitor centre is planned in early autumn 2022. There has been significant interest in visiting the construction site, with 366 people visiting in 2021 (see graphic).

The Northern Lights receiving terminal under construction at Øygarden, September 2021



Visitor overview graphic

## Permanent storage

The first offshore CO<sub>2</sub> injection well was drilled in 2020, and progress was made in 2021 on ensuring compliance with the approved Plan for Development and Operation (PDO). Northern Lights will inject CO<sub>2</sub> in the Dunlin Group, within Exploitation License EL001 in the North Sea. Subsurface work in 2021 encompassed the inclusion of the stratigraphically underlying Statfjord Group into the storage complex, preparation for the 2022 drilling campaign and design of 4D seismic baseline acquisition planned in 2022. This preparatory work focused largely on Containment Risk Assessment, well concept design and data acquisition. In addition, transfer of data into the Northern Lights JV subsurface IT system was initiated.

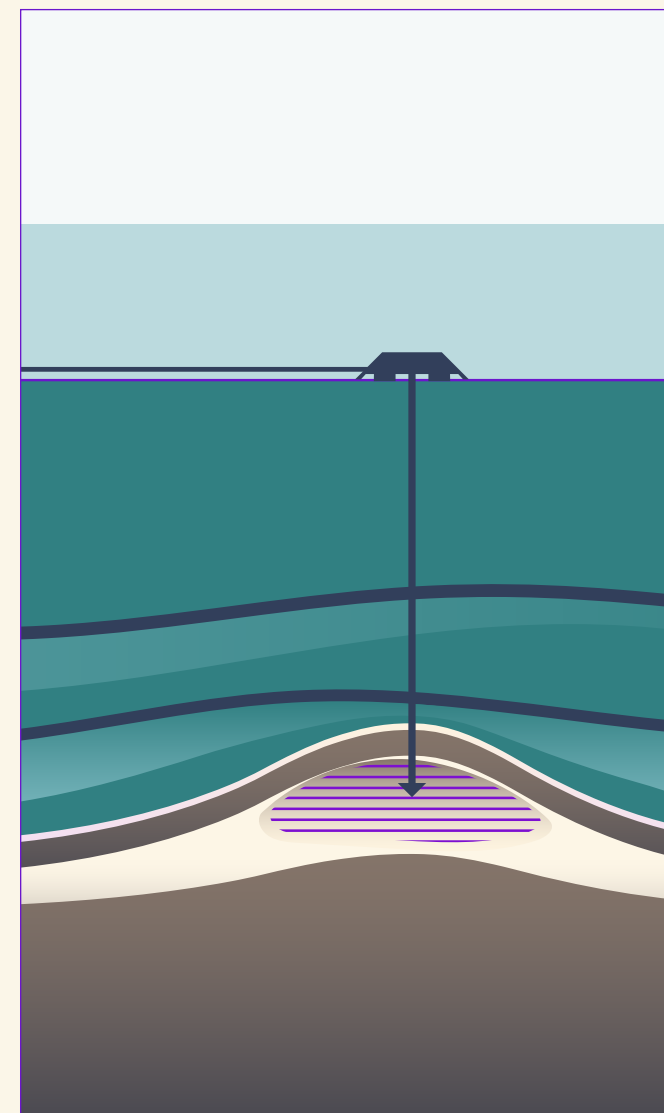
The subsurface team also worked on defining the storage resource classification and contributed to the application for a CO<sub>2</sub> storage licence in the Smeaheia area, as part of Northern Lights' growth ambition. This work was supported by subsurface experts from TotalEnergies.

In 2022, the priority is to finalise the reservoir model and submit the injection permit application, as well as testing and execution of the drilling campaign. Technical work is also picking up to prepare for the expansion of Northern Lights in Phase 2, with the building of a rock mechanical model to study fault reactivation and cap rock

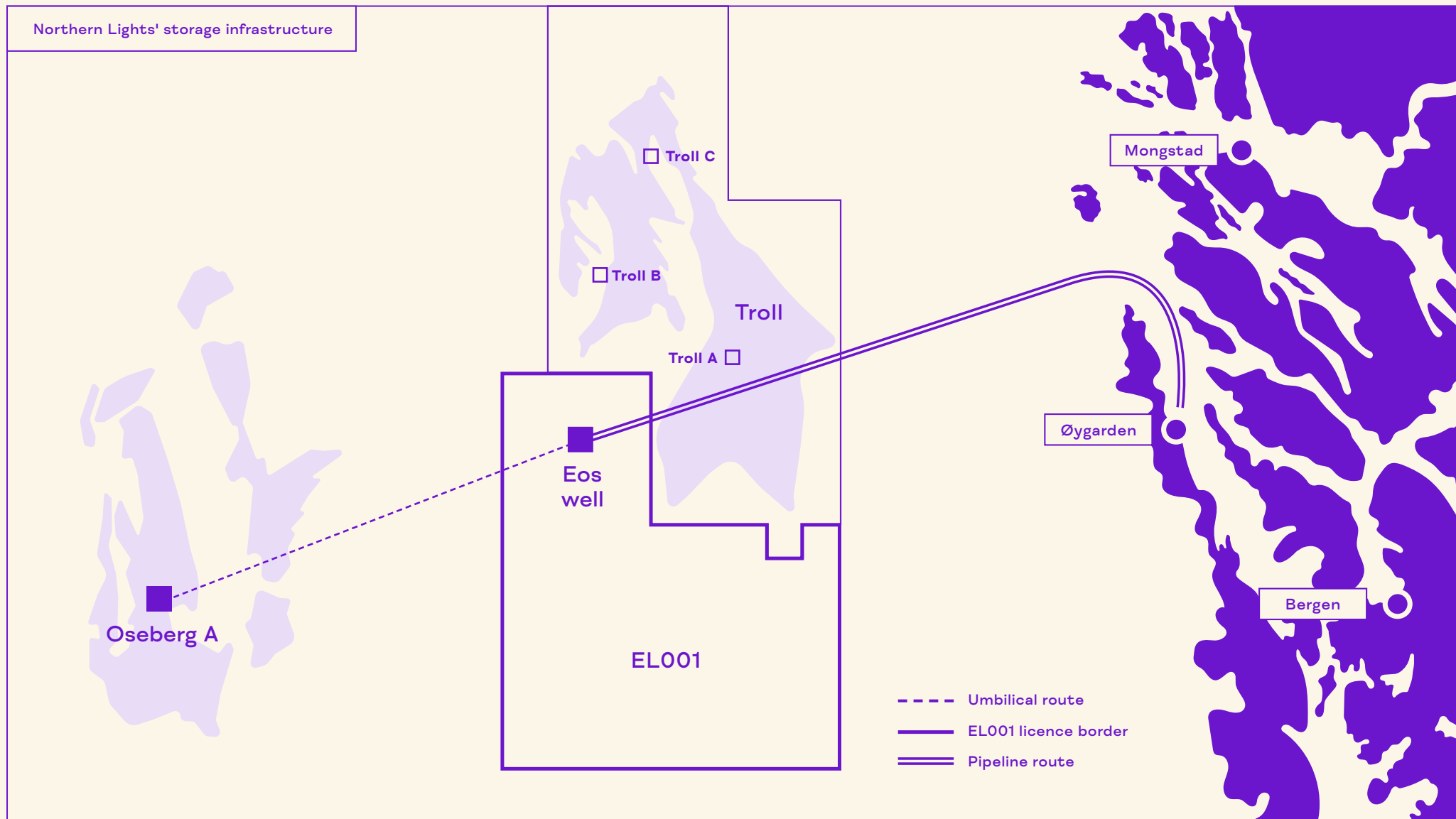
pressurisation, the definition of locations for additional wells and plans for reservoir management and monitoring. In addition, the team will investigate areas for new units, backups and upscaling.

The success of CO<sub>2</sub> storage projects relies on a clear legal framework that provides operators with regulatory certainty. The European Directive on geological storage of carbon dioxide, adopted by the European Parliament and the Council in 2009, aims to provide such clarity on a European level. As a member of the Zero Emissions Platform (ZEP), Northern Lights and owner representatives have contributed with input to a report titled *Experience in developing CO<sub>2</sub> storage under the CCS Directive*.

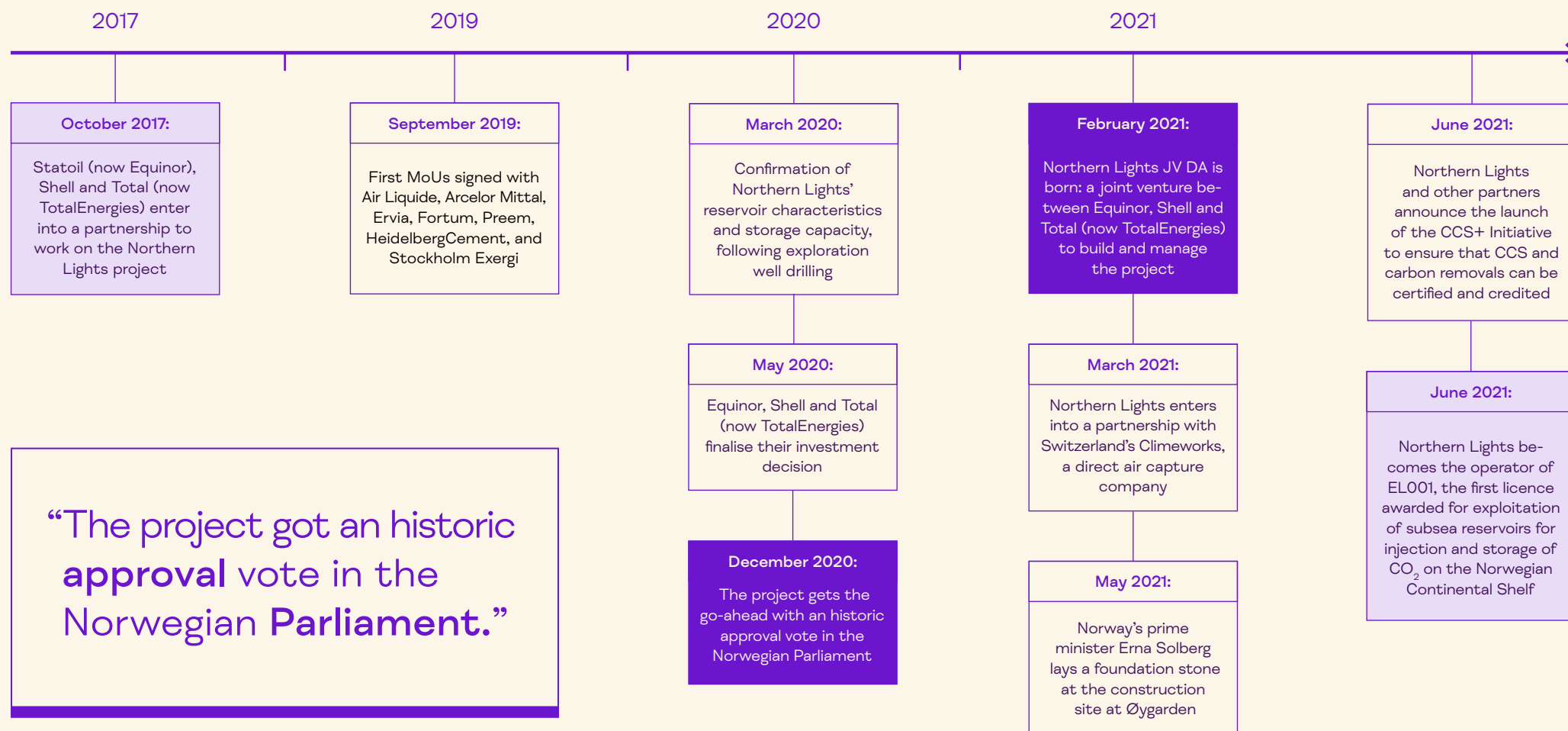
The purpose of the report is to highlight how the Guidance Documents to the EU Directive could be made simpler, clearer and easier to use, and to propose improvements to these Guidance Documents to support the work by regulators and project developers. The key message in the report is that competent authorities should engage early and frequently with operators and project managers. Another key message is to avoid increasing or further detailing the requirements in the Guidance Documents. The report presents a set of reflections and recommendations and will be published in the first half of 2022.



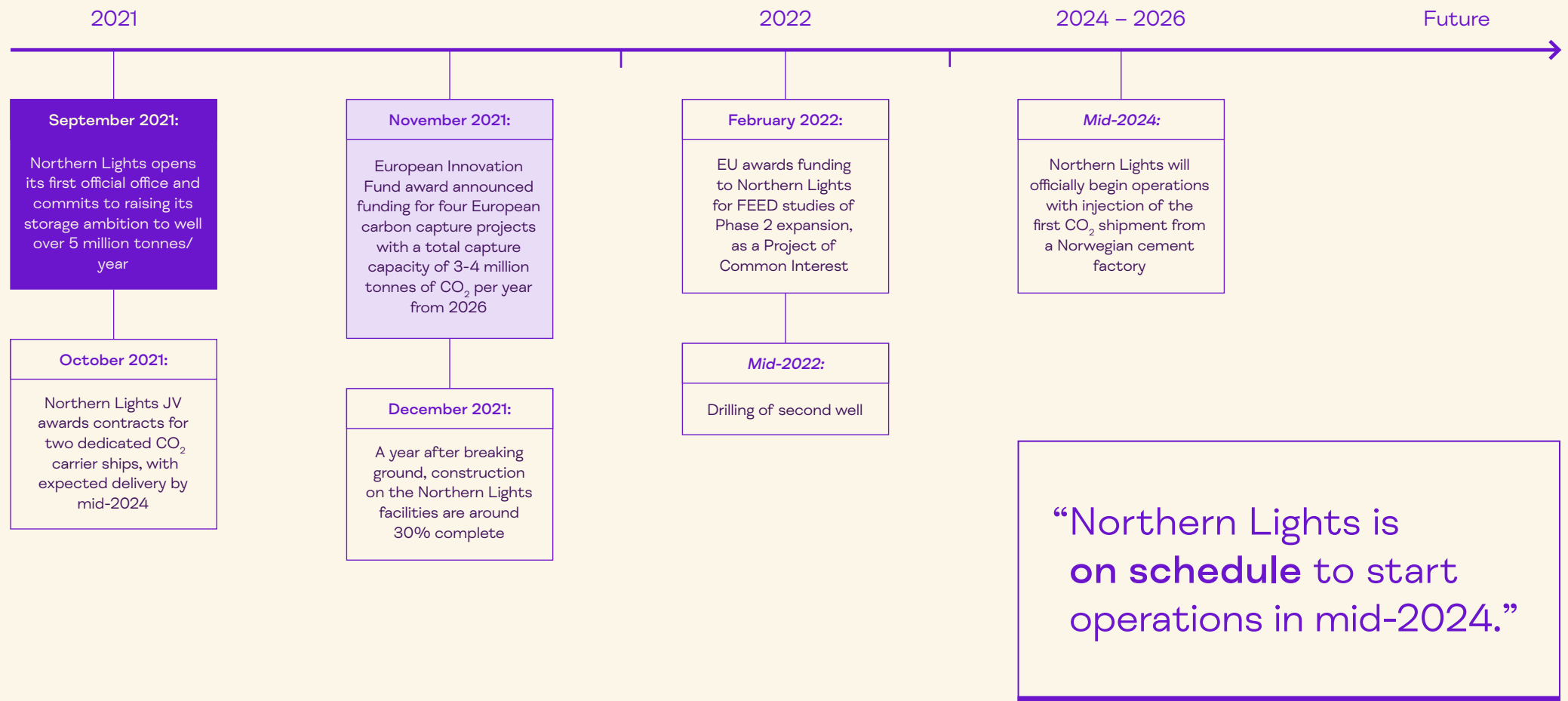




# Timeline



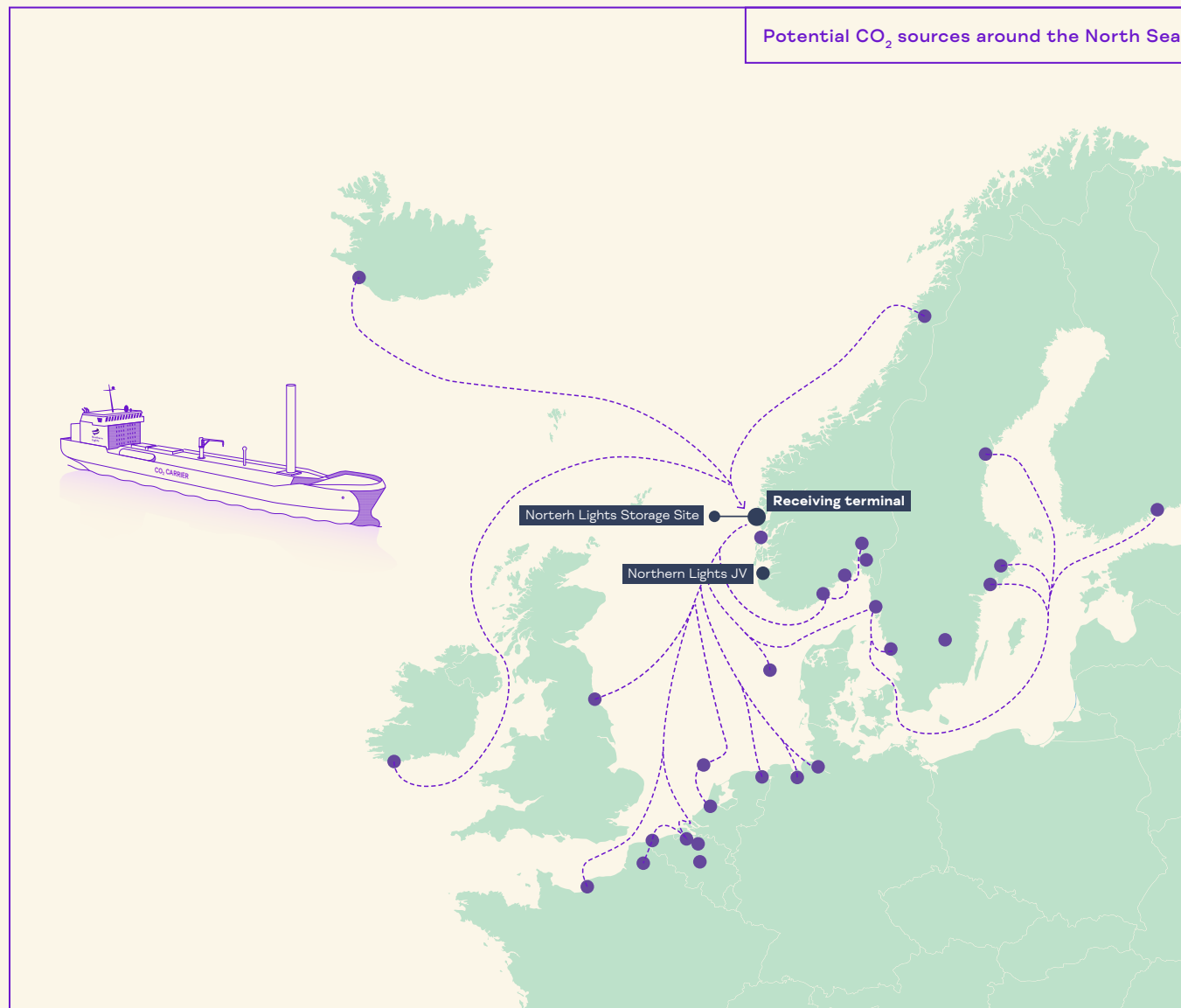
# Timeline



# Learning by doing

Over the past year, the European debate around CCS has shifted from one focused on why it might be needed for decarbonisation to one asking whether CO<sub>2</sub> storage can scale quickly enough to handle the growing demand from European industry – and the growing interest in CO<sub>2</sub> storage to enable carbon removals.

In many ways, that's a result of Northern Lights becoming a tangible reality – with the option to store from 2024. Even in countries that had previously rejected CCS as an option, the interest in Northern Lights' offering to take and store captured CO<sub>2</sub> is gaining significant interest from media, potential customers and among regional and federal political decision-makers.



## Building a market for CO<sub>2</sub> storage

Northern Lights is experiencing significant demand for storage capacity from industrial players in Norway and Europe, as both companies and countries start to implement net zero strategies.

Northern Lights has signed MoUs with 10 potential European CO<sub>2</sub> suppliers representing different industries:

Air Liquide (chemicals), Arcelor Mittal (steel), Borg CO<sub>2</sub> (cluster), Climeworks (direct air capture), Ervia (steel), Fortum Oyj (power and heat), Future Biogas (biomass), Heidelberg Cement AG (cement), Preem (refinery), Stockholm Exergi (biomass).

These MoUs involve looking at solutions for CO<sub>2</sub> delivery, transport and storage of CO<sub>2</sub>, including logistics, CO<sub>2</sub> specifications and roadmap towards potential start of operations.

There are ongoing conversations with potential customers representing waste incineration, cement, steel and other metal, refinery, fertilisers, ammonia, power from natural gas, biomass, biofuel and direct air capture. The first supply contract is expected to be signed in 2022. In addition to CO<sub>2</sub> supply, Northern Lights has also signed MoUs with Microsoft to explore opportunities to integrate digital expertise,

supporting the work to standardize and scale carbon capture across Europe; with Aker Carbon Capture to explore collaboration across the full CCS chain; and with ETH Zürich on research-based CCS initiatives.

In November 2021, the European Innovation Fund announced funding for four European carbon capture projects with a total capture capacity of 3-4 million tonnes of CO<sub>2</sub> per year from 2026. All of these have pointed to Northern Lights as the relevant provider of transport and storage services.

With demand growing across Europe, Northern Lights is likely to need increased capacity from the start of Phase 2 compared to the original plan of 1.5 million tonnes per year if Northern Lights is to be able to guarantee long-term supply of storage capacity. Northern Lights is already exploring the technical issues involved in expanding the number of wells drilled, but it is also important to ensure that emerging regulatory and business models develop hand in hand to open up storage capacity in an efficient and commercially compatible manner.

Northern Lights will continue to focus on tackling these issues with the relevant authorities. Northern Lights receives a high number of requests from industrial emitters located in countries

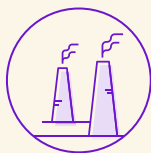
that have CO<sub>2</sub> taxation on top of the European Emissions Trading System (ETS), such as the Nordic countries and the Netherlands. Switzerland also has ambitious climate objectives and is very forward leaning on waste incineration emissions.

The CCS+ Initiative, co-founded by Northern Lights, has attracted significant interest from across the private and public sector and civil society. Formally launched in July 2021, its membership now counts one standard setting body, two carbon consultants, 10 core partners, 17 other partners, and 10 advisory group members. This includes companies from energy, chemicals, waste to energy, biogas, manufacturers, technology providers, NGOs and internationally recognised research institutes.

CCS+ is developing project-based carbon accounting methodologies for a wide range of capture or removal, transport, use and/or storage solutions across the full CCS value chain. This will enable emission reductions or removals to be certified by Verra, or other standard setting bodies, and monetised on the voluntary carbon market, CORSIA (for airlines), via Article 6 for countries, and potentially compliance markets. The first methodology and carbon accounting approaches should be certified by end-2022.

These sectors have strong potential but different levels of experience and maturity in respect to CCS:

### Chemicals/ refineries



- CCS projects are maturing rapidly
- Used to dealing with toxic products and processes
- Covered by the ETS carbon price
- CO<sub>2</sub> delivery can start: 2025-26

### Cement



- High interest in CCS option and preparing plans
- Need help developing business case
- Public-private partnerships not yet in place
- CO<sub>2</sub> delivery can start: 2026-28

### Biofuels/bioenergy



- Interest in CCS is maturing
- Demand and quality assurance of carbon removal credits not yet in place, but needed to close business case
- If solved, projects can be realised relatively quickly
- CO<sub>2</sub> delivery could start: 2024-26

### Steel



- CCS is one decarbonisation option – pre or post combustion
- Public-private partnerships will be needed due to high costs and long-term commitments in a global industry
- Dialogue is still relatively immature
- First projects could deliver: 2028

### Waste incineration



- Difficulties speeding up deployment of CCS
- Business case is difficult: only 50% of waste is eligible for credits, small volumes mean technical costs are high, no direct port location, more complex treatment of fumes
- Projects need to cluster with other sectors to be cost-effective.
- First projects could deliver: 2026-27

### Direct air capture



- Still in pre-feasibility stage where size and location of plant is still unclear
- Main issues are availability and affordability of electricity, and funding mechanisms
- Europe is less attractive than the USA for large-scale DAC plants
- First projects unlikely to deliver before: 2026

## Working with customers

The Northern Lights infrastructure is being developed to receive CO<sub>2</sub> that meets a pre-defined specification (quality specifications for liquefied CO<sub>2</sub>). This is done to ensure the long-term safety and integrity of the various infrastructure components, taking into consideration safety, material selection, thermodynamics and chemical reactions.

The CO<sub>2</sub> has to be liquefied and brought to specific pressure and temperature conditions (CO<sub>2</sub> cargo quality specifications) before being picked up for shipping. The jetty from where the CO<sub>2</sub> will be loaded must be able to receive Northern Lights ships (international shipshore interface standards).

Conversations with customers begin by asking key questions to understand their needs:

- What is the CO<sub>2</sub> source?
- How much CO<sub>2</sub> do you intend to store?
- At which loading port will the CO<sub>2</sub> be delivered?
- When do you expect to be able to start capture?
- What capture technologies are you considering?
- Are you in need of support to secure funding?
- Is there a component of biogenic CO<sub>2</sub> in the mix?



Norcem cement factory in Brevik will be Northern Lights' first customer



# Lessons for the world

The Northern Lights/Longship project is explicitly designed to develop an open-source value chain – while sharing its learnings proactively and transparently with the world. CCS is based on a set of proven technologies with over 25 years of experience. It has, however, struggled to find a scalable business model as a decarbonisation tool.

Longship has brought a new dimension to CCS by modularising the value chain through shipping and kickstarting the industry with government support. As such, it is acting as a pathfinder project, and its experiences are being drawn on in Europe and globally to understand how best to commercialise CCS, build scale and leverage CCS as an effective decarbonisation tool.

**These are five significant lessons that are already transforming the discussion over how to accelerate the commercialisation of CCS in Europe and globally:**

- 1 Temporary government support can overcome the chicken-and-egg problem
- 2 Large-scale demonstration projects facilitate learning by doing and remove hurdles
- 3 Shipping redefines the whole concept of access to CO<sub>2</sub> storage
- 4 CO<sub>2</sub> storage is an enabler for a net zero ecosystem beyond CCS
- 5 CCS value chains can be a cost-effective decarbonisation solution



The administration building and visitor centre at the Øygarden receiving terminal will open second half 2022.





### 1. Temporary government support can overcome the chicken-and-egg problem

An important challenge for CCS has been identifying a business model – no emitter could justify capturing CO<sub>2</sub> with nowhere to store it, and no storage provider would develop expensive infrastructure for a non-existing market. Norway learnt from its earlier experience that government support could unlock this long-standing chicken-and-egg stalemate.

By funding the entire value chain, from capture, through transport, to storage, the companies involved develop a mutual and coordinated commitment to make the project work. The structure of the support provides a clear exit for the government, as well as an incentive for the JV to approach the market early with available capacity. That availability of storage capacity allows emitters to consider CCS as a realistic option for decarbonisation.

### 2. Large-scale demonstration projects facilitate learning by doing and remove hurdles

For CCS to scale up as needed, many elements need to fall in place – policies and regulations, standards, export and import regulations, permissible CO<sub>2</sub> transport options and capture technology applications. Many of these elements only come to light working through a concrete case.

It took the reality of Northern Lights to:

- Facilitate the rethinking of which sectors and which countries could choose CCS as a decarbonisation option across Europe and globally.
- Raise and solve the issue of the London Protocol, banning the export of waste for dumping in marine environments. Not until 2019 were amendments added to allow for CO<sub>2</sub> to be transported between countries for the purpose of permanent subsea storage.
- Tackle the question of how to certify and who to credit in complex CCS projects, now the focus of CCS+.

### 3. Shipping redefines the whole concept of access to CO<sub>2</sub> storage

Norway accounts for around a third of CO<sub>2</sub> storage resources in Europe – around 80 billion tonnes, enough to take all European CO<sub>2</sub> emissions for 20 years. By introducing the concept of large-scale CO<sub>2</sub> shipping, Northern Lights makes CCS an option for all emitters with access to a jetty. The open-access ship-based solution provides flexibility to reach around 350 industrial facilities across Europe, with total CO<sub>2</sub> emissions of around 300 million tonnes per year.

The cost per tonne of shipping CO<sub>2</sub> is significantly higher than for pipelines – but each emitter has relatively small volumes and pipelines are not built unless there is enormous scale. Shipping opens up a hub and spoke model that is changing the debate in Europe and globally. Japan, Singapore and Australia, for example are looking at shipping models to overcome lack of storage capacity in industrial areas or to develop new business models, offering CO<sub>2</sub> storage as a service. In Europe, other hub developers are looking into shipping models to create a network of CO<sub>2</sub> storage options and are exploring inland transport options that connect to CO<sub>2</sub> jetties, such as barges.

#### 4. CO<sub>2</sub> storage is an enabler for a net zero ecosystem beyond CCS

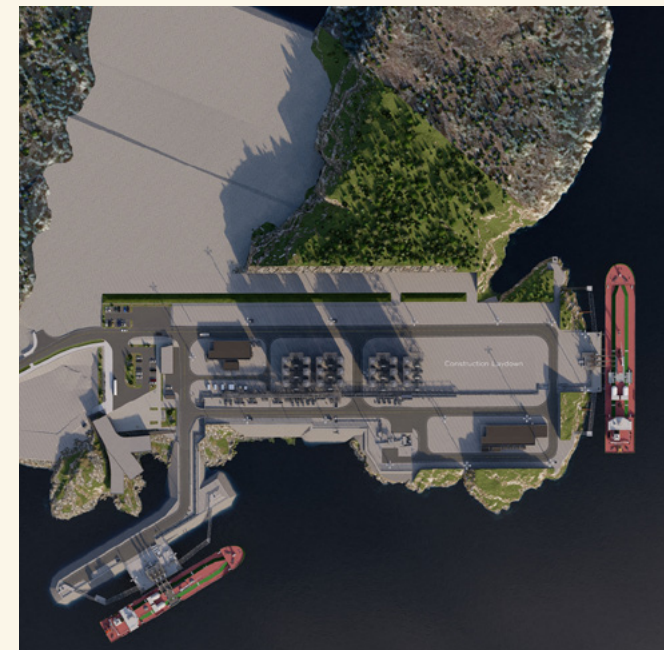
Northern Lights highlighted the importance of creating safe and permanent storage options for carbon removal companies focused on direct air capture companies and biomass with carbon and capture. Climeworks, for example, is collaborating with Northern Lights to explore storage solutions beyond its current mineralisation model in Iceland. That has also provided valuable use cases for policy-makers looking at how to regulate carbon removals – participating in early-stage discussions with the European Commission on a certification scheme to facilitate carbon removals.

Graphic illustration of a possible expanded Øygarden receiving terminal. In Phase 2, Northern Lights will expand capacity to a total of well over 5 million tonnes of CO<sub>2</sub> per year.

#### 5. CCS value chains can be a cost-effective decarbonisation solution

Collective transport and storage infrastructure brings economies of scale in construction and operations, specifically in compression, dehydration, pipeline and storage. At the same time, shared lessons and standardisation bring down the costs of carbon capture and reduce risk.

As new sectors explore the real costs of different options for decarbonisation, CCS is starting to look advantageous. In Oslo, for example, the City Council identified CCS on waste-to-energy as the most cost-effective option for decarbonising these hard-to-abate facilities. Northern Lights is now getting interest from cities across Europe that are working on solutions for this sector.



# How Northern Lights JV works

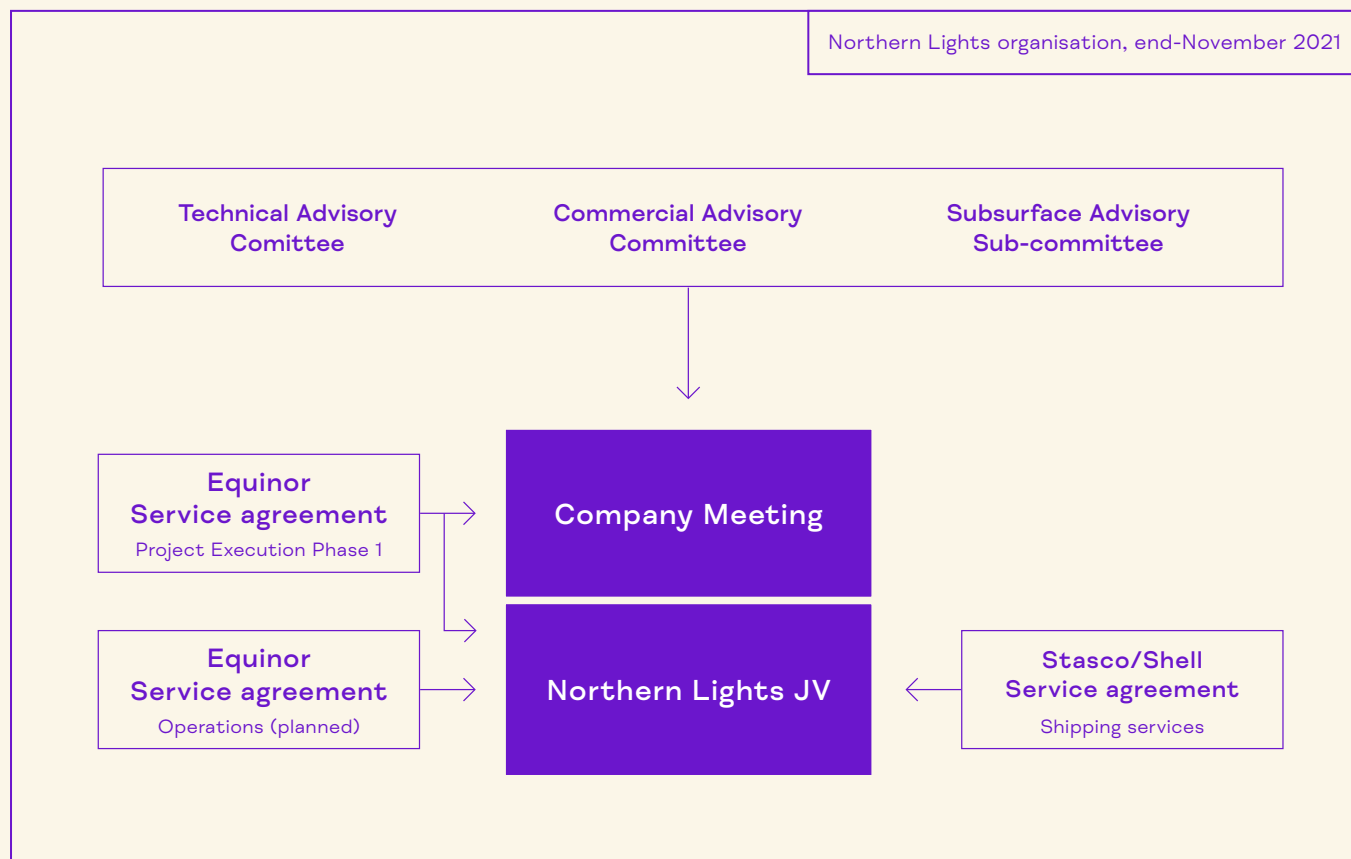
## Governance

Northern Lights JV DA is a registered, incorporated unlimited liability Partnership with shared liability (DA), with three owners: Equinor, Shell and TotalEnergies.

The Company Meeting is the governing body of the Company and makes decisions regarding Northern Lights and its activities. Each owner company appoints one member and one deputy member. The Company Meeting is chaired by a member appointed by the Company Meeting.

### The purpose of the Company Meeting is to:

- Steer direction and strategy
- Ensure alignment and processes are established for integrated corporate governance
- Ensure safe and efficient execution and follow-up
- Capture lessons learned and drive change





Northern Lights JV is the owner of and is accountable for the development and operations of the Northern Lights project. It is also the licence holder and operator of the exploitation licence EL001. Project execution is ensured through technical service providers: Equinor ASA is responsible for the development of the onshore and offshore facilities, whilst Stasco is responsible for the ship building execution for the first two 7,500m<sup>3</sup> vessels. Further service agreements will be put in place for necessary work related to operations and maintenance of the facilities, as well as to any future capacity expansions.

Northern Lights JV has established three advisory committees to support its decision-making:

the Technical Advisory Committee, Commercial Advisory Committee and Subsurface Advisory Sub-Committee. These committees are led by Northern Lights JV with representatives from the owners as members.

The Management Team members are seconded from owner companies on a rotational basis. Other roles are sourced depending on the nature and duration of the needs. The JV's current staff are either seconded from the owner companies or hired as external consultants. As of end of November 2021, the staff count stood at 31.



**Northern Lights JV leadership team (from left):** Juan Charier, Operations & Logistics Director; Anders Vinje Vatland, General Counsel; Cristel Lambton, Technical Director; Stephane Vignau, Subsurface Manager; Birthe Nylund Sundt, CFO; Børre Jacobsen, Managing Director; Jean-Philippe Hiegel, Strategy & Market Director; Nathalie Renzi, HSE Director; Martijn Smit, Business Development Director; Kim Bye Bruun, Communications & Government Relations Director

The organisation is divided into the following departments: Operations & Logistics, Technical & Subsurface, Business Development, Strategy & Market, Finance & Administration, Health Safety Environment & Quality (HSEQ), Legal, and Communications & Government Relations. Most employees seconded or hired to Northern

Lights JV have 10-20 years of experience within their respective fields of expertise. Several of the secondees have been involved in the Northern Lights project for several years prior to the establishment of the company. Secondees have been handpicked from the owner companies to fulfil NL JV's purpose and objectives.

## Health, Safety, Environment & Quality

Everyone working for and with Northern Lights is expected never to compromise on safety, ethics and compliance. This is crucial to success. Safety is at the heart of performance across Northern Lights. It is underpinned by the Business Management System which defines the systematic framework that is designed to sustainably deliver safe, reliable and compliant operations. Northern Lights JV has not had any serious incidents or Lost Time Injuries (LTI's).

Northern Lights is committed to doing business ethically and transparently. Employees are expected to work in line with this commitment, to do what's right and to treat others with respect, fairness and dignity.

“Northern Lights is committed to doing business **ethically** and **transparently**.”

The company manages the impact of all activities on the environment, including spill prevention, waste and air pollution, as well as continuously looking for opportunities to reduce the overall environmental footprint.

A transparent and robust Health, Safety, Security, Environment & Quality (HSSEQ) reporting system, corresponding to ISO 9001:2015, is in place. This provides a framework for planning, execution, monitoring and improving performance.

Northern Lights works together with contractors and Service Providers to secure compliance in design, follow-up of deliverables and activities. The company has an important role in sharing data and experience from designing and developing the CO<sub>2</sub> transport and storage infrastructure.

## Stakeholder engagement

It is a priority for Northern Lights to involve and initiate early dialogue with stakeholders on many levels to ensure regular distribution of information and communication about our activities.

Several meetings were conducted with key authorities in Øygarden & Fedje municipalities (at both political & administrative level), with the Vestland County and with relevant Norwegian government ministries and authorities. Northern Lights also met with relevant organisations such as Øygarden Fire & Rescue, the Directorate of Fisheries and The Norwegian Fishermen's Association.

Monthly reports were sent to the Vestland County Governor on the environmental monitoring program in the sea and to the Norwegian government on benefit realisation.

The site team at Øygarden has arranged several meetings with stakeholders and neighbours in the area, and the dialogue is good and solution-oriented. Comments were provided to a public hearing on zoning plans in Energiparken in Øygarden and follow-up of neighbours' comments and complaints to authorities in relation to establishing and follow-up of grants.

## Membership and support to industry associations and interest organisations

Sharing of knowledge and best practice is part of our core values. Memberships and collaboration with industry associations and interest organisations are an important part of Northern Lights' collaboration, providing a valuable platform to engage with governments, regulators and communities. Northern Lights has different levels of participation and influence in industry associations and interest organisations.

### Memberships:

- **The Norwegian Oil and Gas Association (NOROG):** Industry association for the oil and gas industry in Norway, and part of the Confederation of Norwegian Enterprise (NHO). Northern Lights benefits from its membership in NOROG through shared insights in important areas. The association administers administrative tools and systems on behalf of the industry, including License to Share (L2S) which Northern Lights as a license holder on the Norwegian Continental Shelf is mandated to use in our communication with authorities. NOROG also has a very competent climate/environment team and is an important advocate for CCS.

- **Zero Emissions Platform (ZEP):** The technical advisor to the EU on the deployment of Carbon Capture and Storage (CCS) and Carbon Capture and Utilisation (CCU) – a European Technology and Innovation Platform (ETIP) under the Commission's Strategic Energy Technologies Plan (SET-Plan). Northern Lights derives benefit from its membership in ZEP, in particular through its active role in European CCS policy discussions. We provide strategic input to ZEP through its Advisory Council and Networks.

- **Stavanger Chamber of Commerce:** Norway's largest Chamber and Business organisation. The organisation is working to ensure make Stavanger a preferred region to live and work in. They organise business meetings and seminars.

- **Chambre de commerce Franco-Norvégienne (French-Norwegian Chamber of Commerce):** Promoting economic, commercial and industrial ties that connect Norway and France, and bilateral cooperation between the two countries.

- **CCS+:** Northern Lights is one of the founding partners of CCS+. The objective of the initiative is to leverage carbon markets and scale global decarbonisation and carbon removal efforts. CCS+ is focused on advancing carbon accounting for carbon capture, utilisation, storage, and removal technologies, underpinned by robust

'cradle-to-grave' life cycle assessments (LCA) and verification standards to ensure environmental integrity.

### Financial support:

- **Bellona:** The Bellona Foundation is an independent non-profit organisation that aims to meet and fight climate challenges, by identifying and implementing sustainable environmental solutions. They work towards reaching a greater ecological understanding, protection of nature, the environment and health. Bellona is engaged in a broad range of current national and international environmental questions and issues around the world.
- **ZERO:** The ZERO Environmental Foundation is an independent, nonprofit organization founded in 2002 by a group of former members and employees of Nature and Youth and Bellona. They work to ensure that everyone can contribute and become part of the climate solution and has a goal to drive zero-emission solutions, at the expense of solutions that produce emissions. ZERO is politically independent.

Part 3

# Financial highlights

**Part 3: Financial highlights**

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→ Statement of financial position - Equity and liability	Page 35
→ Statement of comprehensive income/loss	Page 36

→ Statement of changes in equity	Page 36
→ Statement of cash flows	Page 37
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## Statement of profit or loss

(amounts in NOK 1000)	Note	07.06 - 31.12 2021
<b>Operating income</b>		
State Support	4	11 570
<b>Total operating income</b>		<b>11 570</b>
<b>Operating expenses</b>		
Phase 2 activities	7	65 373
Secondees and 3rd party consultants	5, 6	15 968
Depreciation	7, 8	698
Other operating expenses	6	12 346
<b>Total operating expenses</b>		<b>94 385</b>
<b>Operating loss</b>		<b>-82 815</b>
<b>Finance items</b>		
Finance income		2 157
Finance expenses		-1 271
<b>Net finance items</b>		<b>886</b>
<b>Net loss</b>		<b>-81 928</b>

## Statement of financial position - Assets

(amounts in NOK 1000)	Note	31.12.2021	Opening balance
<b>ASSETS</b>			
<b>Non-current assets</b>			
<b>Fixed assets</b>			
Office equipment	7, 10	880	0
Facilities under construction	5, 7, 9, 10	1 639 166	877 092
Ships under construction	5, 7, 10	88 693	0
Right of use assets	8, 10	8 361	0
<b>Total fixed assets</b>		<b>1 737 099</b>	<b>877 092</b>
<b>Total non-current assets</b>		<b>1 737 099</b>	<b>877 092</b>
<b>Current assets</b>			
<b>Receivables</b>			
VAT receivables	11	269 756	89 018
Prepaid cost to Service Provider	11	162 060	0
Other current receivables	11	97 009	527 477
<b>Total receivables</b>		<b>528 825</b>	<b>616 495</b>
Cash and cash equivalents	15	55 021	0
<b>Total current assets</b>		<b>583 846</b>	<b>616 495</b>
<b>Total assets</b>		<b>2 320 946</b>	<b>1 493 587</b>

## Statement of financial position - Equity and liability

(amounts in NOK 1000)	Note	31.12.2021	Opening balance
<b>Equity</b>			
Paid-in capital		549 417	281 919
Retained earnings		-81 928	0
<b>Total equity</b>		<b>467 489</b>	<b>281 919</b>
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Deferred State Support	4	1 221 186	527 477
Lease liabilities	8	6 665	0
Asset retirement obligation	9	153 098	156 714
<b>Total non-current liabilities</b>		<b>1 380 949</b>	<b>684 191</b>
<b>Current liabilities</b>			
Accounts payable		18 517	0
Lease liabilities	8	1 720	0
Other current liabilities	13	452 273	527 477
<b>Total current liabilities</b>		<b>472 509</b>	<b>527 477</b>
<b>Total liabilities</b>		<b>1 853 458</b>	<b>1 211 668</b>
<b>Total equity and liabilities</b>		<b>2 320 946</b>	<b>1 493 587</b>

Stavanger, April 7th 2022

**Grete Tveit**  
Chair of the Company Meeting  
Equinor Refining Norway AS

**Bruno Seilhan**  
Member of the Company Meeting  
TotalEnergies EP Norge AS

**Syrie Crouch**  
Member of the Company Meeting  
A/S Norske Shell

**Harald Børre Jacobsen**  
Managing Director  
Northern Lights JV DA

## Statement of comprehensive income/loss

(amounts in NOK 1000)	07.06 - 31.12 2021
Loss for the period	-81 928
<b>Total comprehensive loss for the period</b>	<b>-81 928</b>
Total comprehensive loss for the period is attributable to:	
<b>Owners of Northern Lights JV DA</b>	<b>-81 928</b>

## Statement of changes in equity

(amounts in NOK 1000)	Note	Paid-in capital	Retained earnings	Total equity
Opening balance	2	281 919	0	281 919
Loss for the period		0	-81 928	-81 928
Other comprehensive income		0	0	0
<b>Total comprehensive loss for the period</b>		<b>0</b>	<b>-81 928</b>	<b>-81 928</b>
Transactions with Owners in their capacity as Owners				
Paid-in capital contribution		267 498	0	267 498
<b>Total transaction with Owners</b>		<b>267 498</b>	<b>0</b>	<b>267 498</b>
<b>Balance at 31 December 2021</b>		<b>549 417</b>	<b>-81 928</b>	<b>467 489</b>

## Statement of cash flows

(amounts in NOK 1000)	Note	07.06 - 31.12 2021
<b>Cash flows from operating activities</b>		
Net loss		-81 928
Depreciation	7,8	698
Net change in accounts payable		18 517
Net change in other accruals and receivables	11,13	-275 332
<b>Net cash flow from operating activities</b>		<b>-338 045</b>
<b>Cash flows from investment activities</b>		
Purchase of fixed assets	7	-1 022 068
Investment related State Support received	4	1 148 908
<b>Net cash flow from investment activities</b>		<b>126 840</b>
<b>Cash flows from financing activities</b>		
Lease interest payments	8	-14
Repayment of lease liabilities	8	-560
Proceeds from capital contribution from Owners		267 498
<b>Net cash flow from financing activities</b>		<b>266 924</b>
<b>Net changes to cash and cash equivalents</b>		<b>55 719</b>
Bank deposits, cash and cash equivalents per 07.06.2021		0
Net currency translation effect		-698
<b>Bank deposits, cash and cash equivalents per 31.12.2021</b>		<b>55 021</b>

# Notes to the financial statements

## NOTE 1 ORGANISATION

Northern Lights JV DA ("Northern Lights JV" or "The Company") was founded 5 February 2021. The operatorship was transferred from Equinor ASA to Northern Lights JV 7 June 2021 and this date represent the start of the Company. See note 2 for further information about opening balance.

Northern Lights JV is a unlimited liability partnership (DA) subject to Norwegian company law and the owners have unlimited liability for their respective shares of the total liabilities. Northern Lights JV's owners are Equinor Refining Norway AS, TotalEnergies EP Norge AS and A/S Norske Shell, all holding equal ownership shares of 33.3 %.

Northern Lights JV is part of Norwegian Authorities' efforts to develop a full-scale carbon capture and storage in Norway, referred to as "Langskip" (Longship).

The address of its registered offices is Byfjordparken 15, 4007 Stavanger, Norway. Northern Lights JV purpose shall be to own and operate facilities for transport and storage of CO<sub>2</sub> including activities related thereto.

## NOTE 2 SIGNIFICANT ACCOUNTING POLICIES

### Statement of compliance

The financial statements of Northern Lights JV are prepared in accordance with the Norwegian Accounting Act 3-9 and regulation of simplified IFRS issued by the Ministry of Finance 3 November 2014. Northern Lights JV has been granted exemption from the requirement in the Norwegian Accounting Act § 3-4 to prepare the financial statements in the Norwegian language. The financial statement is as such only prepared in English.

### Basis for preparation

With the exception of the exemption rules that are available under Simplified IFRS, the financial statements have, in the areas of recognition and measurement, been prepared in full accordance with the relevant IFRS standards, as adopted by the EU at the end of the financial year.

Northern Lights JV has not chosen to use any of the voluntary exceptions that are applicable under Simplified IFRS.

In the areas of presentation and note disclosures, the financial statements have been prepared in accordance with the requirements of Norwegian Accounting Act. The statement of cash flows have been prepared using the indirect method.

The financial statement have been prepared on a going concern basis.

## Opening balance

The Northern Lights Project was established 2 October 2017 when Statoil (now Equinor ASA), A/S Norske Shell and Total EP Norge AS (now TotalEnergies EP Norge AS) entered into a partnership to develop a CO<sub>2</sub> transport and storage value chain. Equinor was the operator in the project, managing the day-to-day activities. The legal entity Northern Lights JV DA was established in a constituting meeting 5 February 2021. However, the first accounting period is considered to start on 7 June, when the operatorship for the Northern Lights Project and exploitation licence 001 was transferred from Equinor ASA to Northern Lights JV DA, along with the related assets and liabilities. This also represents the date when the State Support Agreement ("SSA") between Northern Lights JV and the Norwegian State entered into force and effect.

The SSA is the agreement that regulates the relationship between Northern Lights JV and the Norwegian State. The SSA states that establishment and foundation costs incurred between 6 May 2020 and 7 June 2021 are subject to state support. These costs have been prepaid by the owners (Equinor Refining Norway AS, A/S Norske Shell and TotalEnergies EP Norge AS) and have been invoiced to Northern Lights JV at the establishment date. This cost is presented as the opening balance.

The assets belonging to the project were transferred from the owners at the establishment of Northern Lights JV. As this is considered a transfer of business upon formation of a joint venture, the transaction is considered outside the scope of IFRS 2 and 3. As such, Northern Lights JV has considered the requirements of IAS 8.10-12 and concluded that recognition and measurement based on predecessor values would represent the most relevant and reliable accounting treatment of this transaction. This conclusion is reflected in the amounts presented in the opening balance.

## Functional and presentation currency and foreign currency translations

Northern Lights JV uses Norwegian Kroner, NOK, as presentation currency. NOK is also the functional currency, based on an evaluation of Northern Lights JV's primary economic environment and related cash flows. The cash flow from received State Support and financing activities from the owners are mainly generated in NOK. The currency that influence costs is mainly a mix of NOK and USD, where NOK is the main currency in the establishment period.

Transactions in foreign currency are translated to NOK, at the foreign exchange rate at the dates of the transactions.

Foreign exchange differences arising on translations are recognised in the statement of income as net financial items. Non-monetary assets that are measured at historical cost are translated at the exchange rate on the transaction date.

### NOTE 3

### FINANCIAL RISK MANAGEMENT

## General information related to financial risks

Northern Lights JV's approach to risk management includes assessing and managing risk with focus on achieving the highest risk adjusted returns for the owners. Northern Lights JV is in the construction phase and the Norwegian State will finance a large portion of the investments in this phase. The owners will cover remaining part. This is also supported through the company structure, unlimited liability for their respective shares of the total liabilities Northern Lights JV.

## Currency risk

Currency risks arise from multi-currency cash flows within Northern Lights JV. Northern Lights JV is exposed to foreign currency exchange risk on its purchases. In all material aspect exposed is related to changes in USD, EUR and GBP. Northern Lights JV receives state support for eligible costs.

Please refer to note 4 for further information on state support and definition of eligible cost. State Support is in NOK and Northern Lights JV will as such be exposed to currency exchange differences between NOK and the above mentioned currencies.

Cost not covered by State Support will be covered by the owners through capital contributions. Northern Lights JV can request funding from the owners in NOK, USD, GBP and EUR at its own discretion. This reduces the currency risk exposure for Northern Lights JV.

The largest currency risk exposure is related to the building of two ships. Milestone payment of 60% of the contract value is paid at delivery in first half of 2024. This milestone is nominated in USD. Northern Lights JV will enter into hedge agreement to mitigate the currency risk. The contract for hedging was signed in mid-February 2022. Please refer to note 16 for subsequent events.

### Liquidity risk

Liquidity risk is the risk that Northern Lights JV will not meet obligations of financial liabilities when they become due. Northern Lights JV is funded by the owners and with State Support. On a monthly basis Northern Lights JV ask the State and the owners for prepayment (often

referred to as cash calls). The amount requested represents the expected payment in the following month.

The Norwegian State participation in the project is limited to State Support of NOK 6,119 million for the Basis Investment and NOK 800 million for the Additional Investment (both in 1 November 2019 as basis). Please refer to note 4 on government grants for further information on State Support.

To identify current and future financing needs, Northern Lights JV carries out short-term (12 months) budgets and long-term plans (5-year plan) to plan the liquidity. These budgets and plans are updated regularly, for various scenarios and form part of the decision basis for the Northern Lights JV's management and the Company Meeting.

Northern Lights JV has no external debt financing as of year end 2021.



**NOTE 4****STATE SUPPORT****Significant accounting policies**

Northern Lights JV receives government grants related to its project construction activities and for the first ten years of operation. When such grants are received to carry out certain activities or compensate specific expenses, the grant is recognised in the income statement over the same period as the associated costs. Grants that compensate Northern Lights JV for the cost of purchase or creation of an asset are recognised as deferred State Support in the statement of financial position, and subsequently recognised as other income over the useful life of the asset.

**Deferred State Support**

Northern Lights JV has entered into a State Support agreement which regulates the government grants Northern Lights JV can request. Eligible cost is defined as cost that is subject to State Support. The Agreement between Northern Lights JV and the Norwegian State regulates what is deemed as eligible cost and what is regarded as Basis Investment and Additional Investment. The Norwegian State support Northern Lights JV with different percentages for the Basis Investment and Additional Investment.

Eligible costs related to the Basis Investment comprise of cost necessary for establishment of onshore/offshore facilities to handle 1.5 million tonne CO<sub>2</sub> annually and two 7,500 m<sup>3</sup> CO<sub>2</sub> vessels. This phase is supported with 80% State Support. Eligible costs related to the Additional Investment comprise of a contingent well and an additional ship and is supported with 50%. State Support related to eligible cost not fulfilling the recognition criteria in IAS 16.7 is recognised in the profit and loss statement of 2021.

The state support share for Basis Investment is limited to a maximum of NOK 6,119 million and support for Additional Investment is upward limited to NOK 800 million.

Cost accrued between 6 May 2020 and 31 May 2021 is eligible for state support. This is the amount presented in the opening balance. The owners have paid on behalf of Northern Lights JV in this interim period and the received state support is paid back to the owners. This is presented in the opening balance as other current liability.

**Specification of State Support received through the year**

(amounts in NOK 1000)

Granted for the period before day of the opening balance	527 477
Recognised in profit and loss, as related to expenses in current period	11 570
Recognized as deferred State Support, related to assets under construction	693 709
<b>Total recieved</b>	<b>1 232 756</b>

**Specification of deferred State Support**

(amounts in NOK 1000)

Opening balance	527 477
Support received through the year	693 709
<b>Balance 31.12.</b>	<b>1 221 186</b>

**NOTE 5****PERSONNEL COSTS**

All staff is seconded personnel from the owner companies and a few external consultants. Seconded staff is personnel formally employed in one of the owner companies and is hired to Northern Lights JV for a specific period of time.

The cost related to this is presented on a separate line in the financial statement. Personnel costs related to establishment of Basis Investment are capitalised to the extent that the conditions for this is met.

**Pensions**

Northern Lights JV has not yet established a pension scheme as all secondees and contractor are covered by the pensions scheme at their formal employer. A pension scheme will be established before any direct hire of employees into Northern Lights JV.

**Specification of personnel costs**

(amounts in NOK 1000)	2021
Secondee costs	35 442
3rd party consultancy costs	1 091
Recognized as cost of fixed assets	-20 566
<b>Total</b>	<b>15 968</b>

**Number of employees**

(average FTE for the period)	2021
Secondee	17
External consultants	4
<b>Total</b>	<b>21</b>

**NOTE 6****REMUNERATION OF  
MANAGEMENT AND AUDITOR****Remuneration of management**

The Managing Director of Northern Lights JV is secondeed from A/S Norske Shell. Northern Lights JV has as such not paid any remuneration directly to the Managing Director. Northern Lights JV has in total been invoiced NOK 2,172,00 in 2021 related to Managing Director's services.

There has not been any payments of remuneration to the Company Meeting representatives.

**Specification of auditors remuneration**

(amounts in NOK 1000)	2021
Statutory audit fee	350
<b>Total</b>	<b>350</b>

Reported amounts are exclusive of VAT.

**NOTE 7****PROPERTY, PLANT & EQUIPMENT****Significant accounting policies**

Property, plant & equipment are recognized in the statement of financial position at cost less accumulated depreciation and impairment losses. The cost price of such assets is the purchase price including expenses directly attributable to the purchase of the asset. For assets under construction that are purchased turnkey from the supplier, the cost price consists of advances paid. For self-constructed assets under construction, the cost price reflects the cost of materials and labour added to the asset. Expenses incurred after the asset has been put into use, such as ongoing daily maintenance, are charged to the income statement in the period in which they were incurred, except for expenses expected to generate future economic benefits that are recognized as a part of the asset.

**Facilities- and ships under construction**

Northern Lights JV is currently developing and building a complete facility to receive and permanently store CO<sub>2</sub> from various industrial emitters. In addition, Northern Lights JV also has two ships under construction, which will transport the gas from the customers to the storage facility.

One exploitation well has been drilled and one subsea template has been installed. This was done before formal establishment of Northern Lights JV.

Ship under construction consist as of 31th December 2021 of milestone payment performed in November 2021 for 10% of the total contract value. Progress for ship building as of 31th December 2021 is 0.8%.

**Committed obligation**

Northern Lights JV uses Equinor as a service provider to oversee and control the establishment of onshore and offshore facilities. The total committed amount at year end is NOK 4 billion related to the onshore and offshore facilities. This includes the cost of service provider execution of the onshore and offshore facilities in Øygarden. The Company uses Shell International Trading and Shipping Company Limited for the construction supervision for the building of two vessels. The total committed amount is NOK 1 billion for ship construction and supervision.

Assessment related to impairment, please refer to note 10.

**NOTE 7** **PROPERTY, PLANT & EQUIPMENT**
**Specification of property, plant & equipment**

(amounts in NOK 1000)	Office equipment	Facilities under construction	Ships under construction	Total
Opening balance	0	877 092	0	877 092
Additions	981	762 074	88 693	851 748
<b>Cost 31.12.</b>	<b>981</b>	<b>1 639 166</b>	<b>88 693</b>	<b>1 728 840</b>
Opening balance	0	0	0	0
Depreciations for the year	101	0	0	101
<b>Accumulated depreciation 31.12.</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>101</b>
<b>Book value 31.12.</b>	<b>880</b>	<b>1 639 166</b>	<b>88 693</b>	<b>1 728 739</b>
Economic useful life	3 years	Not started	Not started	
Depreciation schedule	Linear			

Assets under construction are not depreciated.

**Phase 2 activities**

In addition to the facilities currently under construction, Northern Lights JV is also considering an expansion that will make it possible to receive more than 5 million tonnes CO<sub>2</sub> annually. Expenditures attributed to this project are recognised as expense in the statement of profit or loss, as the recognition criterias in IAS 16.7 are currently not considered to be met due to the early stage of

the project maturation. This part of the project is not covered by the State Support agreement and will be funded in total by the owners. As of year end 2021 a total cost of NOK 65,373,000 is related to Phase 2 activities. This is incurred cost for Phase 2 after establishment of Northern Lights JV 7 June 2021.

## NOTE 8

## LEASES

### Significant accounting policies

Northern Lights JV is involved in lease agreements as a lessee. Lease payments related to lease agreements with low value (below NOK 50) or short duration (below 12 months) are recognised in the income statement as operating expenses.

All other lease agreements are recognised in the balance sheet. When assessing whether a lease agreement is short-term (below 12 months) or not, the starting point is at initial date or renewal date of the lease agreement.

### Assumptions and judgements applicable to new leases

Northern Lights JV's office lease agreement is recognised at the time of commencement (end of August 2021). For this lease, the lease liability has been calculated using a discount rate of 2.38%, which represents the incremental borrowing rate.

#### Specification of right-of-use assets

(amounts in NOK 1000)	2021
Opening balance	0
Additions	8 958
<b>Carrying amount 31.12.</b>	<b>8 958</b>
Opening balance	0
Depreciations	-597
<b>Accumulated depreciation 31.12</b>	<b>-597</b>
<b>Book value 31.12.</b>	<b>8 361</b>
Economic useful life	5 years
Depreciation schedule	Linear

#### Specification of lease liabilities

(amounts in NOK 1000)	2021
Opening balance	0
Additions	8 958
Interest expenses	-14
Lease payments	-560
<b>Carrying amount 31.12.</b>	<b>8 385</b>
Due within one year	1 720
Due within one and five years	6 878
Due after 5 years	0
<b>Total</b>	<b>8 598</b>

## NOTE 9

## ASSET RETIREMENT OBLIGATION

### Significant accounting policies

Asset retirement obligations primarily relates to permanent plugging of exploitation wells, removal of subsea templates and other installations on the seabed. The obligation matures at the time when the associated assets reach the end of their useful life. Initial recognition of the liability takes place at the time when the related asset is acquired or installed, with a corresponding amount recognised as an additional cost of the asset and subsequently depreciated over its useful life. The amount recognised is measured as the present value of the estimated future expenditures. In subsequent periods, the unwinding of the discount is presented as financial expense, while other changes are recognised as a change in the cost of the related asset in accordance with IFRIC.

### Estimation uncertainty

The estimated future expenditures relating to asset retirement is based on the current regulation and requirements, while considering the currently available technology. In determining the estimate, scenario analysis is used to address the significant uncertainty associated with developments in future price levels, technological developments and regulatory conditions.

The discount rate used in the calculation is determined using an estimated risk-free interest rate.

### Assumptions and sensitivity

The calculations assume an inflation rate of 2% and a nominal interest rate of 3%. Asset retirement obligation presented in the financial statement of 2021 related to subsea template and exploitation well installed in the EL001 Aurora licence.

Asset retirement obligations at start date 7 June 2021	156 714
Unwind of discount (financial expense)	1 567
Change in estimate during the year	-5 183
<b>Asset retirement at 31 December 2021</b>	<b>153 098</b>

## NOTE 10

## IMPAIRMENT ASSESSMENT

### Significant accounting policies

Northern Lights JV assesses assets or groups of assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. Assets are considered for impairment individually to the extent that a recoverable amount can be determined, or otherwise as part of a cash-generating unit. Deferred government grants that are directly attributed to specific assets, and which will be recognised as income over their useful life, are deducted from the carrying amounts when assessing impairment.

### Significant accounting judgements

Northern Lights JV consist of one cash generating unit (CGU). The impairment assessment has as such been done on one CGU. A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflow from other assets or groups. Northern Lights JV business model is to safely deliver transportation and storage of CO<sub>2</sub>. As an initial approach the service will be delivered as a package deal, where the customer will pay for both transportation and storage. Depending on the outcome of commercial negotiations,

this assumption could be revised on a case by case basis. The two CO<sub>2</sub> ships that are under construction are considered to be included in the CGU. At this stage it is considered to have a limited alternative use, as there is no active market for CO<sub>2</sub> transportation ships yet. This assessment will be reassessed from time to time. It is expected that an active market for CO<sub>2</sub> ship transportation will evolve.

### Estimation, assumption and sensitivity

All of the Northern Lights JV's significant assets are currently under construction and Northern Lights JV does not have any revenues. Furthermore, as Northern Lights JV's business model is new, there is currently no existing market for the transportation and storage of CO<sub>2</sub> service. The impairment assessment is therefore based on uncertain assumptions related to future revenues, including both unit price and volume. A large part of this uncertainty is related to future developments in the EU Emission Trading System (ETS), availability of storage resources, mechanisms for negative emissions and future competition.

Northern Lights JV uses an approach of regular updates of assumptions and economic conditions in establishing the long-term forecasts which are reviewed and approved by the Company Meeting. The assessment is updated at least annually.

When the owners took their final investment decision 6 May 2020 the EU ETS price was approximately EUR 20 per tonne. By 31 December 2021 the ETS price had increased to approximately EUR 80 per tonne. Based on the development of the ETS price and the fact that four of Northern Lights JV potential customers have gone through the last round of EU Innovation Fund support there is concluded that there are no impairment indicators.

### Impairment conclusion

Based on the performed impairment test the recoverable amount exceeds the carrying amount and thus no impairment is recognised.



**NOTE 11****TRADE AND OTHER RECEIVABLES****Significant accounting policies**

Trade and other receivables are recognised at face value, less provisions for expected credit losses. Provisions for expected credit losses are based on the simplified approach, using a life-time expected loss allowance. The credit rating of the counterparties generally means that expected credit loss is not material.

**Specification of other current receivables**

(amounts in NOK 1000)	2021
Prepayment to Service Provider	162 060
VAT receivables	269 756
Other receivables	97 009
<b>Other current receivables</b>	<b>528 825</b>

**Prepayment to Service Providers**

Service Providers can ask for prepayment (cash calls) from Northern Lights JV on a monthly basis. Prepaid amount as of year end 31 December 2021 consists of prepayment for January costs.

**VAT receivables**

Northern Lights JV has not deducted all incoming VAT. Northern Lights JV has formally requested the Norwegian Tax Authorities related to handling of VAT. Incoming VAT will be deducted if it is concluded that this VAT is deductible.

**Other receivables**

Other receivables consist of invoiced State Support for Additional Investment. This phase of the project was approved by the Ministry of Petroleum and Energy by the end of 2021. The State Support amount to NOK 72,278,000 and is equal to 50% of accrued cost for Additional Investment in 2021.

Other receivables also consist of prepaid cost to Service Provider of total NOK 24,584,000.

**NOTE 12****INCOME TAX****Significant accounting policies**

As a General Partnership, Northern Lights JV is not subject to income taxation in Norway. As such, Northern Lights JV does not recognise any assets, liabilities or expenses relating to income tax. However, Northern Lights JV is required to determine a net taxable profit to be allocated to the owners, which is subsequently taxable in accordance with their respective ownership shares.

**Specification of taxable profit**

(amounts in NOK 1000)	2021
Net loss	-81 928
Permanent differences	201
Net change in temporary differences	692
<b>Taxable profit</b>	<b>-81 035</b>

## NOTE 12 INCOME TAX

## Specification of temporary differences

(amounts in NOK 1000)	2021	Change
Fixed assets	1 373 615	-1 373 615
Deferred state support	-1 221 186	1 221 186
Asset retirement obligations	-153 098	153 098
Right-of-use assets	8 361	-8 361
Leasing liabilities	-8 385	8 385
<b>Net temporary difference</b>	<b>-692</b>	<b>692</b>

## NOTE 13 PROVISIONS AND OTHER CURRENT LIABILITIES

## Significant accounting policies

Other current liabilities are mainly related to services received, for which payment is due within the next twelve months. These liabilities are measured at nominal amounts.

## Specification of other current liabilities

(amounts in NOK 1000)	2021
Accrued secondee and 3rd party personnel costs	6 181
Services provider payables	440 475
Other accrued expenses	5 617
<b>Total</b>	<b>452 273</b>

**NOTE 14 RELATED PARTY TRANSACTIONS**
**Significant accounting policies**

Related party relationships are those involving control (either direct or indirect), joint control or significant influence. Related parties are in a position to enter into transactions with the company that would not be undertaken between unrelated parties.

Northern Lights JV is a General Partnership the owners have unlimited liability for their respective shares of the total liabilities. Northern Lights JV's owners are Equinor Refining Norway AS, TotalEnergies EP Norge AS and A/S Norske Shell, all holding equal ownership shares of 33.3%. They have joint control over Northern Lights JV. Transactions with related parties of the owner is reflected in overview below.

**Significant related parties transactions**

On 7 June 2021 Northern Lights JV entered into an asset transfer agreement with the previous participants in the Northern Lights JV project. Refer to note 2 for further information related to opening balance.

**Agreements with related parties to Northern Lights JV**
*Participant Agreement*

On 7 June 2021 the owners of Northern Lights entered into the Participant Agreement regulating the control and objective of Northern Lights JV.

*Service Agreement Equinor ASA*

On 7 June 2021, Northern Lights JV entered into a service agreement with Equinor ASA for the execution of the Northern Lights project that involves building the onshore and offshore facilities of Northern Lights JV. The agreement regulates the establishment of a facility to handle 1.5 million tonnes CO<sub>2</sub> handled and stored annually. Invoice handling facilitated through Equinor Energy AS.

*Service Agreement Shell International trading and shipping company limited ("Stasco")*

On 13 October 2021, Northern Lights JV entered into a service agreement with Stasco for ship building supervision of two CO<sub>2</sub> transportation vessels.

**Specification of related party transactions\***

(amounts in NOK 1000)	Paid-in capital	Other
A/S Norske Shell	183 139	8 344
TotalEnergies EP Norge AS	183 139	15 939
Equinor Refining Norway AS	183 139	0
Equinor Energy AS	0	980 375
Equinor ASA	0	4 055

\*This overview includes invoices received from related parties and does not include any accruals.

**NOTE 15 CASH AND CASH EQUIVALENTS****Significant accounting policies**

Bank deposits, cash and cash equivalents includes all cash, bank deposits and other liquid investments that can be immediately converted into cash, with negligible exchange rate risk. Northern Lights JV have no restricted cash.

**NOTE 16 EVENTS AFTER THE REPORTING PERIOD****Cash flow hedge**

15 February 2022, Northern Lights JV entered into seven forward hedge contracts with DNB. The hedge contracts are related to payment of the two CO<sub>2</sub> vessels currently under construction. The settlement date varies from 19 September 2022 to 3 May 2024 and the NOK/USD rates agreed ranges from 8.91 to 8.95.

**War in Ukraine**

At the time of the reporting of the financial statements the war in Ukraine and the geopolitical situation is challenging. Management has evaluated potential impacts and concluded that there is no material impact on the financial statements for 2021.



Statsautoriserte revisorer  
Ernst & Young AS  
Vassbotnen 11a Forum, 4313 Sandnes  
Postboks 8015, 4068 Stavanger

Foretaksregisteret: NO 976 389 387 MVA  
Tlf: +47 24 00 24 00  
www.ey.no  
Medlemmer av Den norske Revisorforening

## INDEPENDENT AUDITOR'S REPORT

To the Company Meeting of Northern Lights JV DA

### Opinion

We have audited the financial statements of Northern Lights JV DA (the Company), which comprise the statement of financial position as at 31 December 2021, the statement of profit or loss, statement of comprehensive income / loss, statement of cash flows and statement of changes in equity for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion the financial statements comply with applicable legal requirements and give a true and fair view of the financial position of the Company as at 31 December 2021 and its financial performance and cash flows for the year then ended in accordance with simplified application of international accounting standards according to section 3-9 of the Norwegian Accounting Act.

### Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial statements* section of our report. We are independent of the Company in accordance with the requirements of the relevant laws and regulations in Norway and the International Ethics Standards Board for Accountants' *International Code of Ethics for Professional Accountants (including International Independence Standards)* (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Other information

Other information consists of the information included in the annual report other than the financial statements and our auditor's report thereon. Management (the Company Meeting and the Managing Director) are responsible for the other information. Our opinion on the financial statements does not cover the other information, and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information, and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard, and in our opinion, the Company Meeting report is consistent with the financial statements and contains the information required by applicable legal requirements.

### Responsibilities of management for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with simplified application of international accounting standards according to section 3-9 of the Norwegian Accounting Act, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

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## Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Company Meeting regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Stavanger, 7 April 2022  
ERNST & YOUNG AS



Gunn Helen Askvik  
State Authorised Public Accountant (Norway)

Independent auditor's report - Northern Lights JV DA 2021  
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