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The Norwegian Model: Evolution, Performance and Benefits

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Check against delivery:

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Norway’s largest industry

The petroleum activities have been crucial for Norway’s financial growth, and in financing the Norwegian welfare state. Over more than 40 years, petroleum production on the shelf has added around 1560 billion US dollar to the Norway’s GDP.

In 2012, the petroleum sector represented more than 23 per cent of the country’s total value creation.

The revenues from the petroleum sector constitute 30 % of the state revenues.

Since the start of the petroleum activities on the Norwegian continental shelf, vast amounts have been invested in exploration, field development, transport infrastructure and onshore facilities. The investments in 2012 amounted to nearly 29 per cent of the country’s total fixed capital investments.

In 2012, the petroleum sector represented slightly more than half of Norway’s export value. The export of petroleum products amounted to more than 104 billion US dollar in 2012 (NOK 600 billion).

The oil and gas industry has generated jobs and activity in the entire country. More than 200.000 jobs are related to the petroleum industry. This is much in a small country such as Norway, with only 5 million inhabitants.

When developing discoveries, it is important to find optimal socioeconomic development- and operation solutions. Local and regional ripple effects from the petroleum activity are important.

In general, there is a quite broad political consensus on the Norwegian petroleum policy. This creates stability in the system, and this is of crucial importance not least for the competitiveness of the Norwegian Continental Shelf.

Norwegian Oil and Gas

Let me give you a snapshot of Norwegian oil and gas industry:

- We have had activities since 1965
- We have 77 fields in production
- Liquids production in 2012 was 1,9 million barrels per day
- Gas sales 2012: 114,8 billion cubic metres
- We have the world's largest system of offshore high pressure pipelines, consisting of more than 8000 km of pipelines with landing points in 4 countries in Europe.
- 54 companies are currently licensees on the Norwegian Continental Shelf

- We see a high exploration level: 42 wells were drilled in 2012
- Investment level 2012 was 30 billion US dollar (172,5 Bn NOK), an all time high.
- We have produced somewhat more than 40 percent of our resources. Around 20 % is still expected to be undiscovered.

Norway faces the challenge of falling oil production. We have had a considerable fall in production of oil the last 10-15 years. Today, our oil production is almost half of what it was in 2001.

However, there has been an increase in the production of gas. This has offset some of the fall in production of oil; accordingly the overall production from the Norwegian continental shelf has only had a small decrease.

Today we are the 7th largest exporter of oil and liquids and the 3rd largest exporter of gas in the world.

Renewable energy in Norway

Let me also point out that Norway is a large producer of renewable energy – first and foremost hydropower. Norway is the sixth largest producer of hydro power in the world.

Norway's installed hydropower capacity amounts to 30,000 Megawatt (MW), and annual hydropower production is 125 terawatt-hours (TWh) on average.

Norway has, together with Iceland, the largest share of renewable energy production in Europe. Nearly all of the electricity production comes from renewable energy sources.

Renewable energy production will increase in the years to come. Norway will increase the share of renewable energy in the total energy consumption from about 60 per cent today to 67.5 per cent by 2020.

State organisation of the Norwegian petroleum sector

Let me present a brief overview of how the petroleum sector is organised in Norway.

The overall responsibility lies with the Ministry of Petroleum and Energy. There are, however, several other ministries involved, as well as directorates and other entities. This particular division of responsibilities is unique.

The Norwegian Petroleum Directorate is our technical arm, providing us with support mainly related to resource estimates, geology and engineering matters.

Gassco is responsible for transport of gas from the Norwegian Continental Shelf. They are the independent system operator of the pipeline network.

Petoro is a government owned limited company. I will get back to this later.

In Norway, the Ministries usually have the overall responsibility for a sector – with underlying technical bodies supporting them in their work – as you can see on the slide.

The Ministry of the Environment is in charge of emissions to sea and air.

The Ministry of Labour is in charge of health, safety and environment for the workers (HSE).

And when it comes to oil spill emergency and preparedness it is the Ministry of Fisheries and Coastal Affairs that is in charge.

The Ministry of Finance's role is twofold. First, it is responsible for collecting taxes from the petroleum industry. Second, they are responsible for the overall spending of petroleum revenues in the fiscal budget and for managing the Government Pension Fund.

After Macondo we saw great interest from the US for the way we have organised the sector. Some of the changes that were introduced in US after Macondo were in line with the Norwegian system.

Petroleum policy

The overall principle from the start has been that the petroleum resources shall be managed for the benefit of the Norwegian society as a whole.

In line with this, the right to subsea petroleum deposits is vested in the State. It is our resources and the companies get ownership of the resources when they pass the topside of the installation. The companies then have the full right to dispose the equity resources. Our compensation is secured through the taxation system, and some direct state investments.

The goal is to maximize value creation through the licensing system, resource management, industrial development and research and development.

We have a strong focus on health, safety and environment. This is the foundation for all the activity. The authorities and the population must be able to trust that petroleum activities take place in a safe and sustainable manner. This is an important part of the companies' licence to operate.

Key principles of the Norwegian resource management system

In addition to the issues mentioned, there are also some other principals related to our resource management.

First, the industry needs framework conditions formulating acceptable commercial incentives. Investors in the oil and gas business face huge uncertainties. Uncertainty about terms and contractual stability should therefore be minimized.

Predictability and transparency is important for the companies involved. So even with a relatively high total government take, Norway is competitive due to our resource base and stable framework conditions.

Second, clarity of the State's different roles in the petroleum sector is crucial. We reap the economic rent from the petroleum resources through taxes and the State's Direct Financial Interest (SDFI), and we are also the regulator. In addition, the State has ownership interests in Statoil, which is listed on stock exchanges in New York and Oslo. The state's role as an owner in Statoil must be – and is – separated from resource management.

Third, we actively work to attract companies with international competence and experience. The Norwegian petroleum adventure would not have been possible without the presence of foreign oil companies. When the adventure started – in the late 1960s/early 1970s – Norway possessed no national expertise as a host nation for oil and gas. Attracting international oil companies was both a necessary and successful strategy. By using the Norwegian Continental Shelf as a laboratory for technological development, a Norwegian supply industry has been created. This industry is now competing successfully all over the world.

Fourth, national control is crucial. To achieve this, a well educated and well-informed civil service is necessary, in combination with government involvement in each step of the petroleum activities. Let me explain this in a bit more detail.

Our main activities

As you can see, national control is secured in all phases of oil and gas activities on the Norwegian Continental Shelf.

- Before the opening of new areas on the Norwegian Continental Shelf for petroleum activities, a strategic impact assessment is made and a public consultation takes place. Parliament takes the final decision.

- The government awards production licences. Before this is done, there is a public consultation of blocks to be announced.
- The government also approves plans for development and operations of oil and gas fields. Impact assessments must be made and also here it is a public consultation.
- For pipelines and other facilities, the government approves plans for installation and operation. And again there are impact assessments and public consultations.
- When fields and facilities are decommissioned, the government approves the decommissioning plans. And once again there are impact assessments and public consultation.

Let me underline that in all public consultations, this implies consultation both with other relevant Ministries and Governmental bodies – as well as any interested party.

Stepwise opening of new areas

No petroleum activity is allowed until an area has been formally opened for petroleum activities.

We have gradually and prudently opened up new areas for petroleum activity since 1965. First we opened up in the southern parts of the North Sea, and then we have gradually moved north and opened up new areas for petroleum activity in the Norwegian Sea and Barents Sea. Last time the Parliament decided upon opening a new area was in 1994.

Opening up new areas have been done stepwise.

At present, we have two opening processes ongoing:

1. Recently, the Government recommended an opening of the South-eastern parts of the Barents Sea. This was made possible following a Norwegian-Russian delimitation agreement in 2010.
2. The government is also working on opening up the area around the island of Jan Mayen in the Norwegian Sea.

By doing it this way, we gain geological knowledge, experience and technological developments before we move into new areas.

The Norwegian licensing system

A few words about our licensing system:

The Norwegian licensing system is not a system based on auctions, but a discretionary system. We use the oil companies as “agents” to create values within our framework.

As is the case in our opening processes, stepwise opening of areas and exploration are keywords in our licensing system.

We have two different licensing rounds. In frontier areas – where stepwise exploration is important – we use so-called numbered rounds. Now, we are working with the 22. licensing round.

In mature areas – where the geology is well-known – we use yearly Awards in Predefined Areas, the so-called APA rounds. In mature areas there is no need to use stepwise exploration, as geology is assumed to be well-known. In these areas it is important to find and produce the resources before existing infrastructure shuts down.

Before a numbered round is announced, there is a process of nomination. In this process, oil companies nominate blocks they find interesting. We do an evaluation of the nominations and based on this – and on our own evaluation – we suggest an announcement of blocks.

This is then subject to a public hearing, before the government makes its decision about which blocks the companies may apply for.

Based on applications from single companies or a group of companies the authorities award production licenses to groups of companies.

A production license confers an exclusive right to exploration for petroleum, exploration drilling and production of petroleum within the license area

The licensee becomes the owner of his proportionate share of the petroleum produced.

Licensing policy – Compete & Cooperate

The award of production licenses is based on

- geological understanding
- technical expertise
- financial strength
- experience with the oil company

Oil companies compete to be awarded license.

Awards are on non-discriminatory basis. We do not discriminate between Norwegian or foreign companies.

We award to the companies with the best applications, provided that the company fulfils the requirements.

This is a system which has proven very successful.

It is important with a plurality of ideas and internal checks and balances in a production license. Therefore we award a licence to a group of companies, and we make sure that each company has a real influence in the license.

We want the joint venture to maximize the value in the production license.

Risk, cost and profit is shared between the licensees (including the State) in accordance with their participating interest in the joint venture.

As mentioned, the State participates through the State's Direct Financial Interest.

Government cash flow from the petroleum industry

The state receives cash flow from the petroleum industry from several sources. However, there are two main sources of capturing the economic rent: Taxes and the State's Direct Financial Interest (SDFI). As you can see, the dividend from Statoil is not a major source of income, but Statoil is of course taxed.

There is also some income from environmental taxes and area fees, but they are relatively small.

Norwegian Petroleum Tax System

Let me give you a couple of comments on our tax system.

There is an extraordinary return by production of the natural resources. Hence, the government as resource owner should capture its economic rent by taxing the oil companies.

That is why we have a special tax rate at 50 percent in addition to the normal corporate tax rate of 28 percent.

The income of the companies is calculated based on a norm price, which the Ministry sets for the different qualities of oil.

With the norm price we avoid the problem of internal pricing in multilateral companies.

Our tax system is neutral: Projects that are profitable before tax are also profitable after tax. This means that the companies can deduct all costs at the same rate as we tax the income – through net profit tax.

The tax system has been stable over great many years providing predictability for the oil companies.

The tax system is company based. There is no ring fencing, and full consolidation between licenses.

There are no signature bonuses, and no royalty.

Investments are depreciated at a high rate – six years linear.

There is an uplift allowance against special tax: 22 percent of investments.

Losses can be carried forward with interest.

The neutrality implies that the government and company have the same incentive to maximise value. You might say that through the tax system the state is a sleeping partner in all licenses.

In 2005, we introduced a system where companies can get the tax deficit from exploration paid out annually. This has only a marginal cost for the state, but hugely improves the cash need for companies in the exploration phase.

The State's Direct Financial Interest (SDFI)

The Government holds shares directly in oil and gas fields, pipelines and land-based plants.

This is a cash-flow-system, not a legal entity. It is part of the fiscal budget.

Petoro – the government owned limited company – is the business manager of the portfolio. The Ministry of Petroleum and Energy is the owner of Petoro, whereas the Ministry of Finance is the owner of the SDFI-portfolio.

Petoro handles revenues and cost as any other company in the license.

The State's Direct Financial Interest is funded over the State Budget. The net cash flow from the SDFI portfolio is transferred to the Government Pension Fund – Global.

The estimated value of the SDFI-portfolio is today about 200 billion US dollar.

Petoro

I have already mentioned Petoro. As you understand, this is a 100 % government owned limited company.

It is the business manager of the SDFI portfolio. The Ministry of Finance owns the portfolio.

Petoro is relatively small, and has some 70 employees. There are no dividends or tax liability, and Petoro is not an operator. My Ministry pays Petoro through our budget.

Petoro does not apply for new licences. Ministry of Petroleum and Energy keep SDFI-shares where we want to capture extra economic rent.

Statoil

Today Statoil is treated like any other company on the Norwegian Continental Shelf. They have no preferential treatment on the NCS. They apply and compete for licenses and they pay taxes like all other companies.

Dividend from Statoil is part of government take. The Ministry of Petroleum and Energy act only as an owner.

Statoil was established as a national oil company in 1972. In 2001 it was privatised and listed on stock exchanges in Oslo and New York.

The Government holds a 67 % stake in Statoil

MPE acts as a shareholder the following way:

- The Ministry acts in General Meeting or assembly
- We follow up deliveries in strategy, financial and operational results and dividend. There are quarterly one-to-one meetings with Statoil management.
- The Ministry is represented in the nomination committee, which proposes members to the non-executive board and to the corporate assembly.

The Government Pension Fund Global and the fiscal rule

The Government Pension Fund Global – GPFG – was established in 1990, and the first transfer to the fund took place in 1996. Norges Bank Investment Management manages the fund on behalf of the Ministry of Finance. The Ministry of Finance owns the fund and provide the guidelines.

The fund was set up to give the government room for manoeuvre in fiscal policy should oil prices drop or the mainland economy contract. It also served as a tool to manage the financial challenges of an ageing population and an expected drop in petroleum revenue.

The fund is an integrated part of the government's annual fiscal budget. Its capital inflow consists of all government petroleum revenues. The so-called spending rule implies that no more than 4 percent of the fund's return shall over time be spent on the annual national budget. This rule was first established in 2001.

The capital is invested abroad, to avoid overheating the Norwegian economy and to shield it from the effects of oil price fluctuations. The fund holds 60 percent of its assets in equities, 35 percent to 40 percent in fixed income and as much as 5 percent in real estate.

In 2012, transfers to this fund totalled more than 47 billion US dollar (NOK 270 billion). At the end of 2012, the fund was valued at 660 billion US dollar (NOK 3 816 billion). This corresponds to more than 130 000 US dollar (NOK 750 00) for every Norwegian citizen.

Pioneering achievements

In Norway the petroleum sector has also bred a large oil and gas supply and service industry. The industry has been a big success with sensational growth, and developed without people really noticing it.

According to the Norwegian company Rystad Energy, the global market share is close to 80 percent on drilling equipment and 50 percent on seismic and subsea equipment. Not bad for a nation of 5 million people.

We have 40 years of experience solving challenges on the Norwegian continental shelf. Exploration and exploitation have been demanding.

Fields have often been in deep waters, or located in remote areas with no infrastructure in place. Technological development has been necessary to make fields economically viable, or possible to develop at all.

And the history continues. We are doing things we would not have dreamed of 20 years ago.

Thanks to this work, Norwegian industry has developed cutting edge technology: Subsea production systems, subsea compression, and multiphase flow over long distances and in deep waters are some examples.

Fairly recent technological advances made the development of Snøhvit and Ormen Lange possible. The Snøhvit gas field in the Barents Sea was discovered in 1984 and the field would not have been profitable without a subsea solution and multiphase flow.

Another technology step forward is the Åsgard subsea compression project.

The closer the compression is to the well, the higher the efficiency and production rates become. Other fields on the Norwegian continental shelf are planning technology tests and qualifications similar to those practised on Åsgard.

The engagement and interaction between oil companies, industry and research institutions have been fundamental in finding solutions to technological challenges. I am truly proud of the way these players have collaborated and are bringing world class technology and technological solutions to the market.

The fact that we have multiple environments and competition between the actors are important. This must continue.

This is also reflected in the international success of Norwegian companies. We see that the Norwegian subsea industry is expanding on the global market, and we find examples in countries such as Australia, Angola and Brazil.

The Norwegian supply and service industry today

The Norwegian supply and service industry has been a big success with sensational growth.

Today it is Norway's most important industry after the sales of petroleum.

The total turnover exceeds 60 billion USD (360 mrd. NOK).

A Parallel and Active Commitment

As mentioned, we have seen a drop in our oil production, and this is one of our main challenges. Our strategy to enhance future production was presented in a White Paper in 2011.

In Norway we have a broad consensus on how to manage the petroleum resources. The policy, the framework and the tax system have been stable and predictable for decades.

A steady activity level must be maintained in order to achieve the goal of long-term management and value creation from the petroleum resources. This can best be facilitated through a parallel and active commitment in four areas:

1. Increase recovery from existing fields. A significant part of expected production over the next ten years will come from proven fields and discoveries. Measures to improve recovery on mature fields are urgent.
2. We need to develop commercial discoveries. Many of the current discoveries are small. They need to utilize existing infrastructure and must be developed quickly in order to be profitable. Most development candidates can be developed with a subsea template tied in to existing infrastructure.
3. We continue active exploration of opened acreage, both in mature and frontier areas.

4. And we are implementing opening processes for the South-eastern parts of the Barents Sea and for the island of Jan Mayen, as mentioned.

Integrated Management Plans

Let me give a couple of comments on our integrated management plans. We have integrated management plans for all the Norwegian seas, 3 in total.

The integrated management plans provide a framework for the petroleum industry.

The integrated management plans are presented as White Papers to the Parliament. They are based on facts, and are updated every fourth year.

These management plans are important, because they provide a basis for coexistence between industries, environment and management of natural resources.

They provide a stable framework for the petroleum industry. And are therefore important to ensure predictability for the industry – one of the cornerstones of “the Norwegian model”.

I believe one of the main successes of the Norwegian model has been a combination of national control of the resources and an open system inviting foreign companies to participate.

The overall principle from the start has been that the petroleum resources shall be managed for the benefit of the Norwegian society as a whole.

The natural resources are used for the benefit of the Norwegian population in a long term perspective. This is in turn important for the legitimacy of the entire industry.

Our system has generated enormous wealth for Norway and put us in a very comfortable financial situation. Through the spending rule – where all income from the petroleum go to the pension fund and only 4 percent of this fund is put into the national budget – we have avoided the “Dutch disease”.

This way, oil and gas resources do not become a curse for the nation, but on the contrary – a blessing.

Thank you for your attention!

["The Norwegian Model" - powerpoint presentation](#)

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