

# Impact of the Financial Crisis on Energy Security Investments

## A view from the oil and gas industry

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Mr. Chairman, Excellencies, Ladies and Gentlemen,

Thank you for inviting me to address you on this critical issue. My presentation contains certain forward looking statements. My first slide therefore contains a statement of caution that we would like to make and also, as a listed company are obliged to make.

This presentation contains certain forward-looking statements that involve risks and uncertainties. In some cases, we use words such as "believe", "intend", "expect", "anticipate", "plan", "target" and similar expressions to identify forward-looking statements.

All statements, explicit or implied, other than statements of historical fact, including, among others, statements such as those regarding: plans for future development and operation of projects; reserve information; expected exploration and development activities and plans; impact of facility maintenance activities; expected start-up dates for projects and expected production and capacity of projects; expectations of the synergies produced by our recent acquisitions, such as our interest in the Marcellus shale gas development; the expected impact of the current financial crisis on our financial position to obtain short term and long term financing; the projected levels of risk exposure with respect to financial counterparties; the expected impact of USDNOK exchange rate fluctuations on our financial position; oil, gas and alternative fuel price levels; oil, gas and alternative fuel supply and demand; the completion of acquisitions; and the obtaining of regulatory and contractual approvals are forward-looking statements.

These forward-looking statements reflect current views with respect to future events and are, by their nature, subject to significant risks and uncertainties because they relate to events and depend on circumstances that will occur in the future. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied by these forward-looking statements, including levels of industry product supply, demand and pricing; currency exchange rates; the political and economic policies of Norway and other oil-producing countries; general economic conditions; political stability and economic growth in relevant areas of the world; global political events and actions, including war, terrorism and sanctions; changes in laws and governmental regulations; the timing of bringing new projects on stream; material differences from reserves estimates; an inability to find and develop reserves; adverse changes in tax regimes; the development and use of new technology; geological or technical difficulties; operational problems; the actions of competitors; the actions of field partners; natural disasters and adverse weather conditions; and other changes to business conditions; and other factors discussed elsewhere in this report. Additional information, including information on factors which may affect Statoil's business, is contained in Statoil's 2008 Annual Report on Form 20-F filed with the US Securities and Exchange Commission, which can be found on Statoil's web site at [www.Statoil.com](http://www.Statoil.com).

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot assure you that our future results, level of activity, performance or achievements will meet these expectations. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. Unless we are required by law to update these statements, we will not necessarily update any of these statements after the date of this review, either to make them conform to actual results or changes in our expectations.

### Figure 1 Forward looking statements

When you, Mr. Chairman summarized the discussion of this committee in 2007, you pointed out that:

*“With a large and growing population coming out of poverty, the energy resources to sustain this development need to be secured through ever increasing efficiency in the energy production, conversion, transportation and use. In particular, an improved recovery of fossil energy needs to be sought through timely and balanced investments to avoid waste and secure high recovery later. Stability and security are the prerequisites for the adoption of the long-sighted energy policies that this requires”<sup>i</sup>*

In my presentations to the Economic Commission for Europe at its 63<sup>rd</sup> Session in March 2009, I tried to reflect and add detail to this statement by highlighting how the recoverable amounts of oil and gas are critically dependent on irreversible recovery processes. This often requires early investments to secure

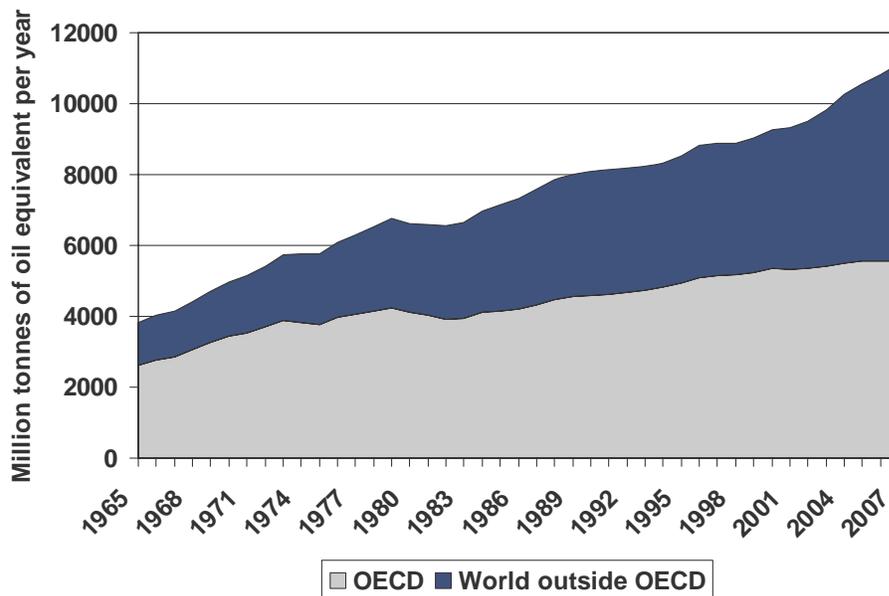
late recovery. Failing to do so causes physical waste. Most of the waste is underground and goes unnoticed. Traditionally we have seen it also on the surface when gas is flared. The investments to recover economically marginal quantities will be justified when the decision maker can be confident that future wellhead or mine gate value of recovered quantities are sufficiently high to justify the recovery efforts.

To achieve high well head values requires a comprehensive approach addressing the economic and social conditions, efficiency and cost of the recovery operations and the geologic conditions. To have confidence that the well head values will be high in the future requires the approach to be robust.

The international community of governments, industry and financiers all influence recoverable quantities and can increase it substantially if they act in concert. The efforts of the ECE and this Committee are important, as demonstrated by the development of the UN Framework Classifications for Fossil Energy and Mineral Resources and the other work that is on your agenda for this meeting.

The financial crisis has affected and reduced our ability to secure future supplies by investing in efficient recovery. Before discussing this, it is useful to recall that we would be seeing rapid changes in the energy sector, also without the “crisis”.

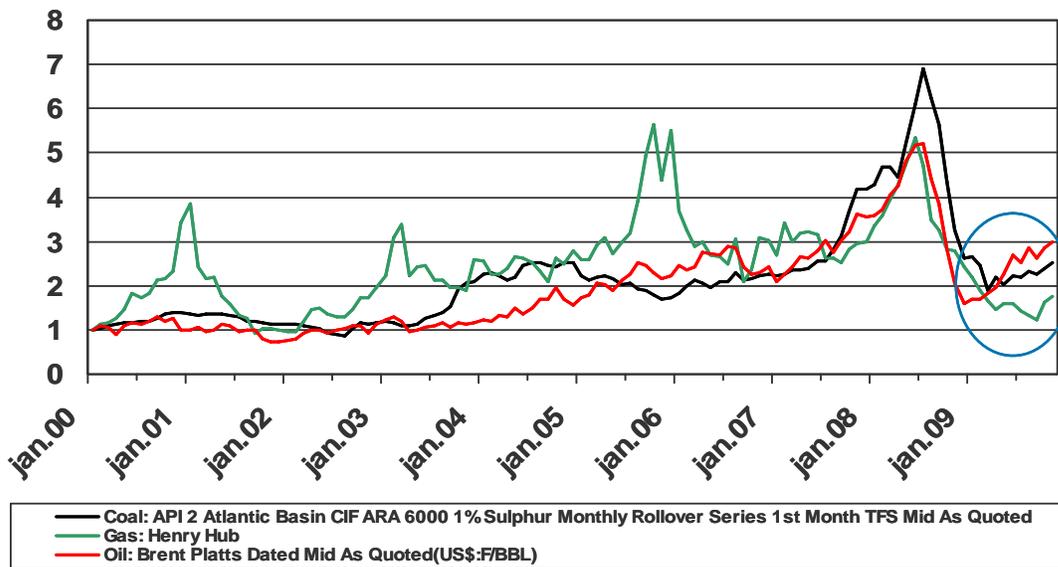
First we have experienced strong economic growth in developing countries over the last decades. Those of us who have lived and worked under their conditions can only welcome this. Initially, the growth took place from a very low base compared to the volume of economic activity in OECD countries. This is no longer the case. We are seeing a strong increase in the quantity of energy demand relative to OECD consumption, often stimulated by subsidies.



**Figure 2 Total world primary energy consumption (Source: BP Statistical Review of World Energy 2009)**

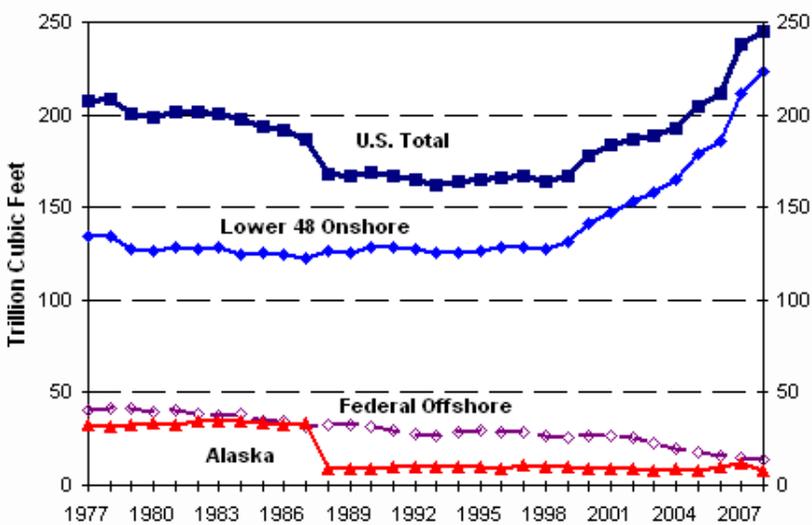
Second and related to the rapid rise in demand, there has been an erosion of spare capacity. This has added pressure on prices.

Third the amount of cash that has been channelled into commodities papers increased in the period of high price rise. This may have contributed to drive prices beyond the sustainable level in 2008. A correction down to still quite high prices was triggered by the reduction in demand during the financial crisis.



**Figure 3 Relative prices of Coal, Gas and Oil (Jan 2000=1)**

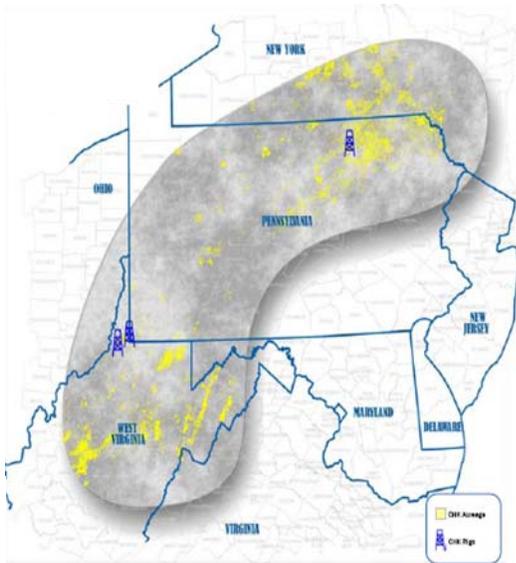
Forth we see a globalization of gas prices as we speak, caused by the LNG trains in Qatar and elsewhere that are coming on stream. At the same time, technology has made large new reserves of gas available from shale near the large US markets, causing the LNG shipments intended for the US to be globally available.



Source: EIA / U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 2008

**Figure 4 US Dry Natural Gas Proved Reserves 1977-2008**

In their report released on the 30<sup>th</sup> of October this year, the Energy Information Agency (EIA) showed the development in proved reserves of dry gas in the US. They are increasing. In addition they mention that the contingent resources also are increasing.



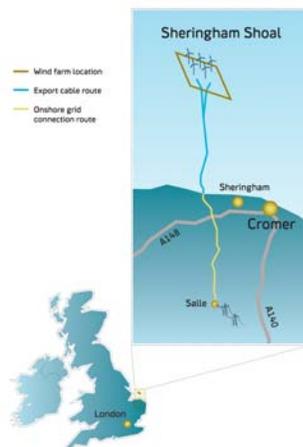
- Recoverable Statoil equity resources of 2.5 - 3.0 bn boe
- Planned Statoil production of 50,000 boepd in 2012
  - Current production <2,000 boepd
- Ambition to produce 200,000 boepd after 2020

**Figure 5 Initial Phase of Marcellus Shale Production on Track**

In Statoil, we are developing the Marcellus shale gas in partnership with Chesapeake. The figure shows the extent of the shale and their proximity to the prime gas market on the US East Coast.

Fifth and nearly as important as development is the political need driven ambition to reduce the emission of green house gases to the atmosphere.

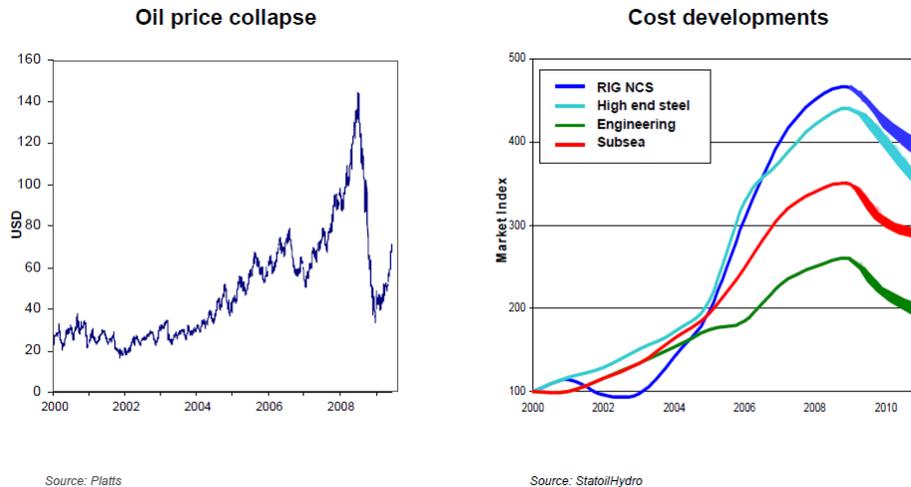
Statoil is engaging in clean energy production where it finds that it can contribute constructively to meet the future energy demands in a responsible manner.



- Statoil and Statkraft (50/50). Statoil operator of the development phase.
- NOK 10 bn investment: 88 turbines, 20 meter depth, 20 kilometres off Norfolk
- 315 MW capacity, annual production of 1.1 TWh from 2011
- Income from power sales and green certificates gives competitive profitability
- Participating in UK 3<sup>rd</sup> licensing round

**Figure 6 Sheringham Shoal – clean energy to 220 000 British homes**

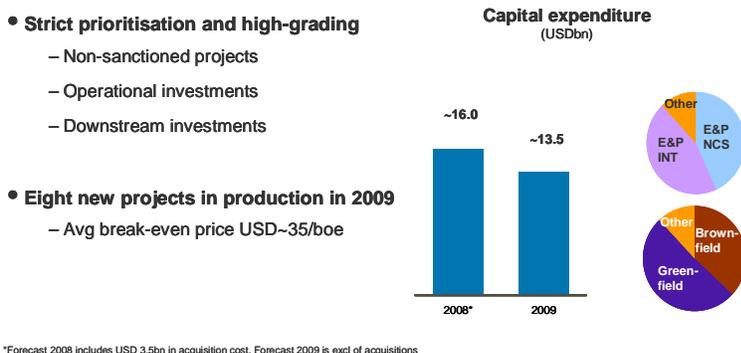
While these five processes have been going on, we have seen a rapid rise and fall in primary energy and commodity prices.



**Figure 7 Cost reductions**

The costs follow the pattern of the energy prices, but are lagging in time. This caused the margins to increase when the energy prices increased. The bulk of this was appropriated to governments through asymmetric contracts and fiscal arrangements, either agreed or renegotiated during the hype. Now that the energy prices have fallen, the costs remain stubbornly high, reducing the margins. This is affecting the industry much harder, but oil producing countries are also affected.

Some took advantage of the high prices preceding the crisis to reduce debt. Statoil did. Our strategy can therefore remain firm. We believe the demand for energy will remain high in the long term and are now using our flexibility to invest through the cycle in order to meet the supply situation as the effects of the financial crisis dissipate. We nevertheless must take account of the current situation to adjust the pace at which we are investing. Many IOC's are behaving similarly as are some important NOC's. However, many appear to be reducing their investments significantly.



**Figure 8 Change in upstream capital expenditure**

Overall, investments are down. This is in part a result of costs starting to reduce. More importantly it is a result of postponing/cancelling projects as a direct consequence of the financial crisis.

The activity level with respect to mergers and acquisitions is also reduced.

Although the recent increase in the oil price has brought some contingent projects back on the agendas for commitment, it is highly undesirable that E&P costs rise more than other costs.

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It is powerful to address the consequences of the financial crisis on energy security and environmental protection in three parts:

- The long term effects of the increase in price volatility and thus risks that increase the cost of capital.
- Reduced efforts in recovering economically marginal resources from producing fields.
- The immediate postponement of new field developments.

Increased capital costs in the form of a higher risk adjusted discount rate may block decisions required in the short term to secure energy supplies, and to protect the environment and maintain the safety and operability of facilities for the long term. This is a serious threat.

Reducing recovery efficiency in producing fields often results in waste underground, if not above ground. This “depletes” recoverable resources faster and reduces energy security irreversibly.

Postponements of new field developments have high visibility and affect supplies in the short to medium term. In general, postponements will seldom be executed in such a way that they threaten long term energy supplies and security.

## **Conclusions**

The financial crisis hit at a time when:

- A large and growing population is coming out of poverty, generating unprecedented consumption of energy and commodities.
- Consumption is deteriorating the environment, and imposing reduced quality of life. This translates to costs that are beginning to be internalised in costs of energy causing the deterioration.
- Emission free energy forms are promoted.

There is a clear and important relation between the values of fossil energy at the source and the recovery efforts that can be justified. Furthermore the physically irreversible nature of the recovery processes often requires recovery investments early to secure high recovery late. The quantities to be recovered at the economic margin in this way require long sighted policies and stable international economic frameworks. This committee is uniquely positioned to promote them.

In the aftermath of the financial crisis we see a risk to energy security, but also an opportunity. Stable long term economic frameworks have been jeopardized by the observed jump in volatility. As a result, the cost of capital increases and investors become shorter sighted. Enduring projects, including essential infrastructure investments become more risky. Some are likely to be postponed, reduced or

dropped, and reserves will be lost. Producing countries and consumers are most strongly exposed in the long term.

Short to medium term, energy security is jeopardized by a drop in current investment rates resulting from reduced economic margins between costs and revenues.

Energy forms that do not cause emissions, wind and solar power in particular were on a path of reduced production costs also before the crisis. The general cost reduction that we see now is bringing the production costs further down.

In sum the situation is delicate. To improve the quality of life, we need more than ever Governments and industry to act in concert across frontiers, being political, technical or economic.

Thank you for your attention.

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<sup>i</sup> Economic Commission for Europe. "Investing in Energy Security Risk Mitigation". ECE Energy Series no. 34. United Nations, 2008