

POWER: The uncertainty in the energy sector is increasing. That means we must be more active and conscious of our energy choices.

Energy options in an uncertain world

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Western Norway has been hit harder, in economic and employment terms, than any other region due to the dramatic fall in oil prices in the recent times. The large industrial cluster directly and indirectly targeting petroleum related activity, has made our region particularly vulnerable to fluctuations in petroleum prices and other factors. Power prices have so far been far more stable, but also here we see that expectations of continued low energy prices in the coming years have led to developments such as, e.g. a power company, BKK has implemented measures for cost savings and job cuts. Expectations and uncertainty affect dispositions and strategies in the short and long term for all energy activities.

Uncertainty is something that the energy sector has always lived with, but developments have meant that uncertainty has increased and become more complex than before, throughout the supply chain from production to consumption. That means we all have to deal more actively and deliberately to uncertainty in our energy choices.

We distinguish between four main types of energy insecurity: market, political, regulatory and technological. Some examples:

For petroleum activities, primarily the market uncertainty is the one we have to deal with. The fall in oil prices can be attributed to a number of aspects of developments in the international oil markets. The market power of the price cartel OPEC has been reduced over time, thus contributing to the fall in prices, and as a result new producer countries outside the cartel have obtained shale oil and gas from the United States, have increased supply in the market, and made the country almost independent of imports. The demand for oil has been affected by the shift from fossil fuels to renewable energy. Prices are now on the rise again, but the forecasts for the inflation outlook diverge greatly.

An example of political uncertainty about energy prices can be obtained from the Nordic power market. This is a well-functioning market with good balance between supply and demand. To promote a political goal of increasing the share of renewable energy, the Norwegian-Swedish electricity certificate market was established in 2012, with a targeted production of renewable energy of approximately 28 TWh by 2020, mainly wind power. An almost unanimous chorus of economists warned strongly against the scheme and claimed that it would result in economically unprofitable investments in new capacity in the power sector.

A low energy price resulting from overcapacity is affecting the profitability of established power producers, and can make it harder to achieve other political goals, for example on energy efficiency. Gradually other critics joined, from both the energy industry itself and the authorities. Political signals may indicate that the scheme will not be considered extended after 2020, at least not in its present form.

"Regulatory uncertainty" is closely associated with political uncertainty, but regulation constitutes a separate jurisdiction. This form of uncertainty can also be exemplified by the power sector. The 1990 [Norwegian] Energy Act laid the foundation for a new organization of power sector, with the distinction between market and networks, and the establishment of a new regulatory regime with competition regulation of energy market and regulation of network grid operation.

Now a reorganization of the power grid is considered, including the proposal to establish so-called distribution system operators (DSOs) in the network. The regulatory scheme for power grid is also being evaluated by the Norwegian Water Resources and Energy Directorate (NVE), and a new model will be in place from next year for the coming regulatory period. There is a need to harmonize grid regulation within the Nordic-Baltic electricity market, and also with the regulatory regime in the EU. The latter due to market coupling to Europe and new power cables that have been enacted built to the UK and Germany. The Government is now also considering that other players than Statnett should be able to own and operate interconnectors.

Shale gas revolution in the United States came as a result of a technological and economic breakthrough, the "fracking method." It came quite unexpectedly in the entire energy world, except the few insiders who knew of the new technology. Even more pervasive on the field of daily energy, for most people will be the, broadly defined technology related to smart grids. Here we are only on the threshold of a development that will turn upside down the usual notion of energy and sector organization. The development opens up new opportunities for existing and new players in networks and markets, but also would be contingent on that we as consumers need to have a far more conscious relation to our energy and our energy choices.

For example, we could achieve significant cost savings by moving parts of our consumption over from periods of high stress in production and networks, and thus high prices, to times of low load and low prices.

An important area for all major types of uncertainty is located at the intersection of energy and environmental policy.

An example: A recent report by Thema Consulting announces that the price of electricity may rise very strongly until 2030, actually to a multiple of current levels. It will take place primarily as a result of quota price of CO₂ in the EU emissions trading market, which Norway is linked to, is expected to rise sharply. Yet this assumes that there is political will and consensus among countries in the quota market to implement measures providing for such an outcome. The experience so far is not particularly encouraging in this regard.

Over the years, several attempts have been made to tighten the quota amount and to bring up the price, but these have largely stranded to due to political opposition. In any case, the analyzes of consultant companies are in stark contrast to other analyzes and forecasts for the price development of power in the longer term.

Uncertainty cannot be eliminated, but new knowledge and better methods would make risk more manageable for the energy sector. Too much focus is put on this area in energy companies worldwide. The Swedish power company, Vattenfall, as an example built up a large department working exclusively with risk analysis. Here research and industry can meet in fruitful cooperation.

