

HEDGING STRATEGIES ON PURCHASE OF NATURAL GAS - A CASE STUDY ON EXAMPLE OF A SOLUTION MINING COMPANY

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Abstract

Risk management has become more and more a key factor of success in all kinds of enterprises during the last 15 years. Consequently, evaluation and functional tests of risk management cultures in each kind of business are in the focus of auditors as a high priority. German corporate law has adopted the need to run a functional risk management as well, hence, the derivations of an individual liability of each manager involved if such systems are not duly implemented.³ This paper is about a case study based on the example of a German medium-sized enterprise in the field of solution mining. As solution mining is a very energy intensive process, one of the main focusses of risk management is on the purchase of natural gas. The company runs an own Combined Heat and Power generation plant, which is exclusively fed with natural gas. The annual cost of gas purchase is about 55% - 60% of the total costs. This study tries to find out the current status of risk treatment in this regard, as well as possible ways of improving the entire process of gas purchase under risk management aspects. As the global market for natural gas is deregulated, hedging of quantities and prices is crucial and basically the best way to set up a counter-strategy. This paper will show possible approaches to natural gas hedging as a contribution to the treatment of this key risk to the company.

Keywords: risk management, medium-sized enterprise, natural gas, raw materials, hedging.

Introduction

Hedging of commodities is essential for companies, which are considerably dependent on those. It is an integrated part of modern risk management systems, but in the same way possible source for various mistakes in using this tool.

The benefit of a working hedging strategy is clearly the avoidance or at least reduction of financial risks to the company having their origin in extremely volatile commodity markets. As hedging does not only reduce risks, but in turn might cut off potential chances by compensation of falling prices, the focus needs to be put on a reasonable balance of the risk / opportunity level.

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Suggested citation: DAVIDS, P.C.G. and FEKETE, M. (2018) Hedging strategies on purchase of natural gas - A case study on example of a solution mining company. *Comenius Management Review*, 12 (1). p. 31-45.

³ Aktiengesetz § 91 Nr. 2

Hedging as a risk management tool is already well researched on a theoretical basis and broadly implemented. However, there is no general recipe for all of the thinkable cases of application, which makes a decent evaluation and implementation to each individual enterprise absolutely necessary.

Consequently, this paper will cope with the mentioned demand of individuality by analyzing and evaluating the status of an existing hedging set-up of a company working in the solution mining business. This business is very energy consuming and acquires its energy demands such as electricity and heat through an own Combined Heat and Power generation plant, which solely uses natural gas as a primary energy source. Energy cost per annum is in the range of 55% - 60% of the total costs, which illustrates the urgent need to handle this key risk for the sake of viability of the entire company.

After analysis, firstly, the authors try to find the ways of improving the existing hedging strategy for the benefit of the company and, secondly, to show a basic approach of how existing hedging systems especially for natural gas could be improved.

1 The market for natural gas in Germany

Many manufacturers consume natural gas, both as a feedstock and as a fuel for their manufacturing process. Generally, there is no other fuel that can be used for these purposes, or else the potential substitutes are costly, so this portion of industrial demand is not sensitive to residual fuel oil prices. However, both processing demand and boiler fuel demand are sensitive to changing levels of industrial activity — especially in the glass, food, paper, chemical, petroleum refining, primary metals, fabricated metals, and machinery industries (Miller, 2007).

Most of the natural gas consumed in Germany is imported from Russia and Norway with equal shares of about 1/3 each. Another ~13% comes from domestic production; the remainder is split over various countries (www.verivox.de, 2017).

The German gas market was liberalized in 1998 with the “Energierrechtsnovelle” and opened to competition. The German electricity industry was characterized by electricity supply companies (RUs) each with a monopolistic public supply obligation in contractually delimited supply areas (Fritz et al., 2001). From 1998 onwards, a change of the supplier was possible, but the practical implementation of the liberalization took many years. The majority of the market is firmly in the hands of some large conglomerates. For smaller vendors the market entry was still difficult, especially through complex and cost-intensive network access regulations. Only when the Federal Network Agency took over and regulated the supervision of the gas grids in July 2005, network access became more and more untightened.

At present, there are over 700 gas suppliers, of which the vast majority is only regionally active (www.strom-magazin.de, 2018). However, twelve years after liberalization, the market is determined by seven large-scaled super-regional gas companies, which also cover most of the grids. In addition, they do not have just numerous subsidiaries operating on the gas market, but also hold shares in about 350 regional gas suppliers (www.toptarif.de, 2018).

Due to the strong commitment as long-distance gas importers, grid operators and distributors of natural gas, these long-distance gas companies play an important role in the market. Seven companies together contribute to around 80% of the domestic gas, accounting for 90 to 100% of natural gas import and accounting for almost 80% of the storage capacity. Unlike electricity, gas is not produced locally, so the end-users, often municipalities and other local suppliers are dependent on the gas and the transport capacities of the long-distance gas companies (www.toptarif.de, 2018).

In order to ensure fair competition on the German gas market, the EU Commission has already repeatedly challenged competition proceedings against the gas grid operators and examined whether the companies are using their market power to exclude other providers from the market. It is currently being discussed to transform the private grids into a public operating company thus facilitating market entry for other providers.

Other than private households which are obliged to cover their demands through local suppliers, commercial or industrial users basically have got access to the energy exchange (EEX) situated in Leipzig after liberalization of the gas markets. Commercial / industrial entities can choose whether they cover their demands by using full supply contracts (almost the same as those for private households), which provide fixed prices over a certain period at no price transparency or whether they rather buy the gas on the energy exchange or OTC at full price transparency.

The final gas price in Germany comprises of the cost of natural gas, the transportation costs for using the grid, and several surcharges as well as energy tax and VAT.

Transportation costs are determined by the physical way from the Virtual Trading Point (VTP) to the first flange on the property of the customer. Within each market area so-called VTPs are set up at the level of the superregional long-distance gas networks, where gas can be supplied and traded. Access to this virtual trading venue is given via a contract or capacity booking with the competent grid operator (Jänig, 2007). There are two VTPs where gas can be bought in Germany, which are ‘Gaspool’ for the north and ‘NetConnect Germany’ (NCG) for the south. Dependent on where the end-customer is situated, one or the other VTP applies. Fig. 1 explains the composition of the total purchase costs for a natural gas in Germany.

Taxes and contributions are legally binding and grid costs are legally controlled, hence, both are not negotiable.

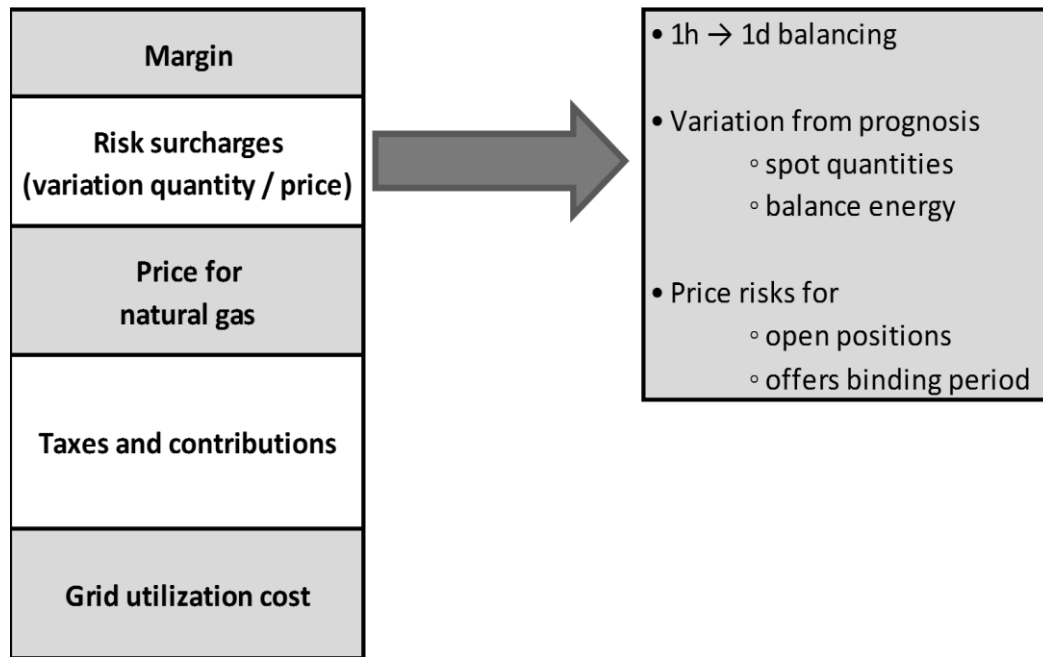


Figure 1. Determination of Purchase Cost for Natural Gas (Source: authors)

2 Options to hedge natural gas

The traditional means of risk transfer are insurance (i.e. the coverage of a specific, but overall foreseeable resource requirement based on collective and time risk compensation) and hedging (i.e. the transfer to the capital market) (Romeike et al., 2013).

Trading in securities, foreign exchange, precious metals or commodities always involves the risk for every investor of having an adverse price movement. Therefore, some traders secure their financial transactions with a counter-transaction. This transaction is also called a ‘hedge’ in the figurative sense, that you build a protective hedge around your depot.

Hedging is a tool that experienced investors have been using for many years. However, the term is somewhat discredited by a part of the so-called hedge funds, which have led to significant financial losses and bankruptcies of renowned banks and companies in the global financial crises of recent years.

Hedging has only a limited share in common with hedge funds. As it turns out, hedging requires investment in the opposite direction. Taking of short position or short sales is only allowed to hedge funds, therefore, the likelihood of confusion. Hedging is still used by many traders today.

When done well, the financial, strategic, and operational benefits of hedging can go beyond merely avoiding financial distress by opening up positions to preserve and create value as well. But done poorly, hedging in commodities often overwhelms the logic behind it and can actually destroy more value than originally was at risk. Perhaps, individual business units hedge opposite sides of the same risk, or managers make too much effort on hedging risks that are immaterial to a company’s health. Managers can also underestimate the full costs of hedging or overlook natural hedges in deference to costly financial ones. No question,

hedging can entail complex calculations and difficult trade-offs. But in our experience, keeping in mind a few simple pointers can help nip problems early and make hedging strategies more effective (McKinsey & Company, 2010).

Derivatives are financial instruments that 'derive' their value from an underlying asset; in this case the price of natural gas. Derivatives can range from being quite simple, to being exceedingly complex. Basic types of derivatives include futures, options, and financial swaps (Miller, 2007).

The term "derivative" can be traced back to the Latin word "derivare" which means "derive, derived". Long before its use in finance, this term has been used in chemistry where it refers to a chemical compound derived from another (= split-off product, e.g. acetylsalicylic acid [aspirin] is a derivative of salicylic acid; Derivative of morphine). As a similar approach exists in the development of financial products derived from components of other products, the term has been transferred from chemistry to the financial sector (Kloch, 2007).

As pointed out earlier, financial hedging is just one option to get a grip on volatile price movements of commodities. Another option is the so-called natural hedge. Natural hedge works, when a product to be sold has a more or less direct correlation of price movement with a commodity used for production.

If the natural hedge is large enough to reduce the net cash flow volatility sufficiently, the channel member will prefer to use the less complex natural hedge. In case of a negative IRAP, the channel member is motivated to increase or even maximize the volatility of the net cash flow stream. This can be accomplished by using asymmetric contract relationships on the buying and selling side (Pennings et al., 2004).

In the enterprise in our example, which produces potash, there is a correlation between the price for natural gas (which is needed for production in considerable quantities) and the final product potash itself. The following graph illustrates this correlation.

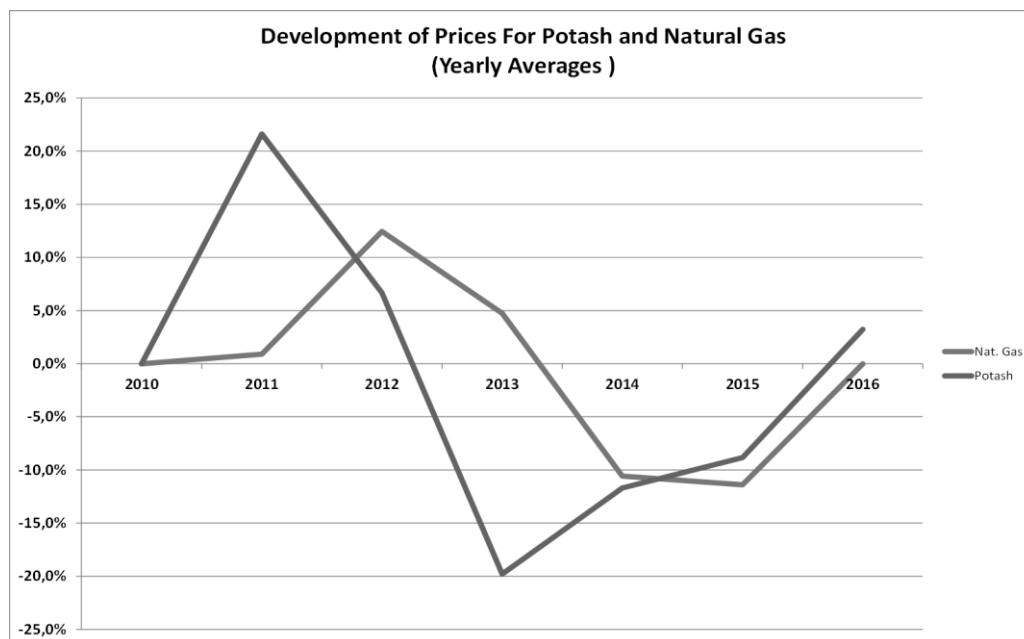


Figure 2. Development of Prices for Potash and Natural Gas (Source: authors)

The graph shows that the correlation is not strongly parallel, but the basic effect is obvious. It is essential to the company of this example to consider natural hedging as part of the overall hedging strategy. Otherwise the risk of over- or under-hedging through financial instruments is unavoidable.

Another option to hedge natural gas prices is a strategic approach. Sales contracts can be structured in a way that the price risk is simply passed through to the customer. Practically this can usually be done by implementing an index-based price mechanism. However, the counterpart, having in mind his own risk, might not be happy with such a clause. But the way, as a common practice in business, it could be a compromise resulting in a split of the risk where each party involved can cope with.

An effective risk management program often includes a combination of financial hedges and nonfinancial levers to alleviate risk. However, few companies fully explore alternatives to financial hedging, which include commercial or operational tactics that can reduce risks more effectively and inexpensively. Companies should test the effectiveness of different risk mitigation strategies by quantitatively comparing the total costs of each approach with the benefits (McKinsey & Company, 2010).

3 Methodology

The research methodology used in this paper is the *case study*, which is deemed to be a comprehensive strategy in empirical research that uses a variety of techniques and methods to find answers to the triggering research questions. A case study ideally combines several techniques for collecting data from different sources and can apply case-by-case different methods of analysis of those data.

Qualitative research methods in economics and business research are still dwarfed by large quantitative analysis and economic modelling. Nevertheless, on an international level the stance towards qualitative methods becomes increasingly open-minded. Therefore, in this article case study research is highlighted as a representative of qualitative research methods (Göthlich, 2003).

Business case studies enable the reader to record individual business functions (e.g. purchasing, production, sales, financing, human resources management, etc.) using case histories that are as close to reality as possible in an overall context (www.wikipedia.de, 2018).

The reason why case study is the preferred research method used in this paper is the fact that reliable data from the company's risk management system is broadly available and easily accessible as the company already runs a special risk management system especially on mitigating price risks related to the purchase of natural gas. In the same way, historical data is available. The goal of this study, namely, to show opportunities to improve the existing system, requires a target-performance comparison. This, in the opinion of the authors, is best done by using a case study.

4 Evaluation of the Status Quo of the Example Enterprise

The company runs an own combined heat and power generation power plant gaining steam and electricity needed for the process. The power plant is based on two gas engines, a steam engine as well as two active and one passive steam boiler. The primary energy source is solely a natural gas. The average annual consumption of natural gas amounts to 280,000 MWh. The entire plant is certified as a high-efficiency power plant, thus, benefiting from various energy tax reliefs after German law.

The company is in the solution mining business and energy, which is mainly a saturated steam, is crucial for the extraction and refining process. As solution mining is a very energy intensive process, one of the main focusses of risk management is on the purchase of natural gas. The cost position for the purchase of natural gas is about 55% - 60% of the annual total costs.

Unlike the conventional potash mining, solution mining extraction and processing is an environmentally-friendly process, because there are no dissolution residues, which need to be disposed of in tailings piles. Furthermore, the staff does not need to work in the underground compared to conventional potash mining, which is a big advantage in terms of work safety. Amongst other solution mining technologies, the opportunities of solution mining of carnallite are felt more and more attractive since the beginning of the 21st century. Carnallite solution mining projects have been initiated around the world since then. The double salt carnallite ($\text{KCl} \times \text{MgCl}_2 \times 6 \text{H}_2\text{O}$) is a relatively low graded potash source, which makes its conventional mining uneconomical. Currently, there is just one active mine in the world using the innovative process of hot selective solution mining of carnallite, which meanwhile has proven the economic feasibility of the process (Davids, 2016).

Other than in times before, nowadays, the company is able to purchase natural gas on a full price transparency due to the liberalization of the gas market (see remarks above). It is possible to buy the gas at the European Energy Exchange (EEX) directly or alternatively through a broker. In the past, just full supply contracts could obtain those offerings, just one price comprising of the entire price components mentioned in Chapter 1. The main disadvantage of full supply agreements is the impossibility of deriving margins of the intermediate trade. As the company is able to purchase on full transparency, margins can clearly be seen and consequently be negotiated.

The brokers' margin is the only price component which can be negotiated. The option to negotiate price of the natural gas is twofold: if the purchase is done directly on the energy exchange (the same as on the stock exchange), the price is not influenceable. If the purchase is done via OTC, the price is partly suggestible, for instance, if a market actor tries to get rid of a long position for whatever reason.

Currently the company is using a service provider instead of the direct access to the energy exchange. This broker also arranges for the hourly and daily clearing of gas consumption. Furthermore, the company has several frame supply agreements with producers of natural gas. All of the quantities purchased elsewhere were collected and cleared by the

service provider as well. So the provider has no exclusivity, thus, not hindering the company's ability to create a diversified portfolio when it comes to suppliers.

A typical annual consumption load curve on a daily basis is shown in the graph below.

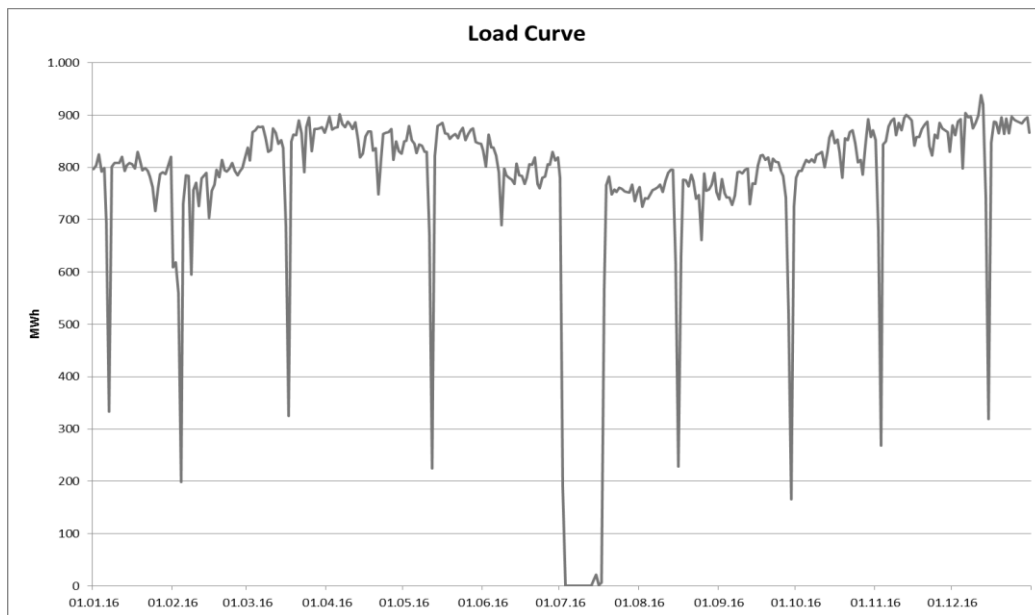


Figure 3. Load Curve (Source: authors)

The more or less stable consumption of 700 MWh/d over the year is evident. The range from 700 MWh/d through 900 MWh/d represents a high volatility in comparable short periods. This volatility is following adjustments in process control, which is typical for the plant's process design. The down peaks are mirroring planned maintenance stops and a longer maintenance break in the summer.

Currently the front year and the following year are hedged with calendar-year products, which means that the company is committed to take and pay a fixed quantity of x MW per each hour of the year at a fixed price. The company in this example is committed to 15 MWh/h for each of the above mentioned years. This gives a daily quantity of 360 MWh. The remaining demand is bought on the spot market at varying prices. Hence, the range from 360 MWh to about 900 MWh is exposed to price volatility risks on one hand, but could also benefit from lower prices compared to the hedged quantities on the other hand. The hedged range from 1 to 360 MWh (illustrated in Fig. 4) is capped to both sides, thus, eliminating price risks and opportunities in the same way.

The company does not use short term futures like quarterly, monthly, BOM (Balance of the Month) or day-ahead products for hedging so far. Theoretically, financial instruments could be used as well, but do not make any sense as the market at the competent GASPOOL hub is liquid and is able to provide all of the mentioned products through original suppliers of natural gas or through traders. Another reason not use financial instruments is the fact that financial instruments have to be paid fully immediately after purchase whereas the underlying products only must be paid on a monthly basis after consumption.

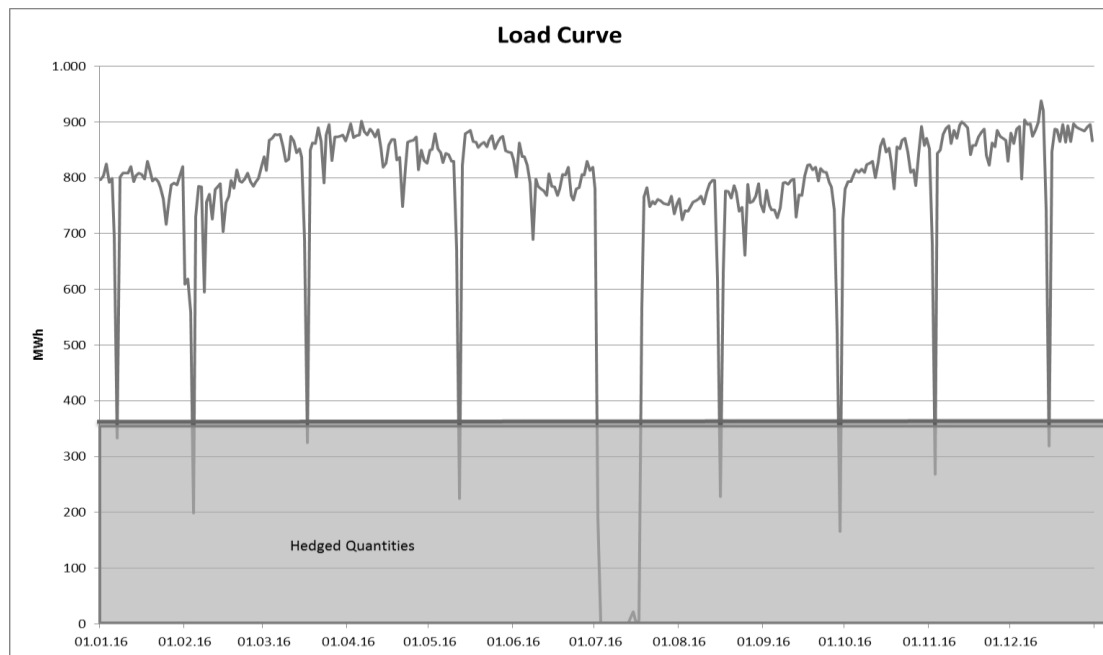


Figure 4. Load Curve with Hedged Quantities (Source: authors)

Depending on creditability of a company, there might be a demand from the supplier(s) for a certain security deposit in cash or by an appropriate bank guarantee. For the company in this example this is not the case due to its top rated status.

5 Guidance to Improve the Existing Hedging System

The approach to an improvement of the current hedging strategy is not quite easy due to a number of variables to be considered. The first question must be ‘how can we secure a certain range of profit in our overall product calculation’? All other questions, e.g. for optimization, have to subordinate to this first question. As, in our example, the potash price cannot be set by the company itself and needs to be derived from the world market price, it is an important variable as well when it comes to calculation. As outlined earlier, there is broadly seen a certain level of self-hedging between the potash price and the price for natural gas (see Fig. 2). So should there be a considerable price slip in potash prices, it would influence the gas price in the same direction as well. Nevertheless, there could be an offset in timing and in magnitude. However, this phenomenon needs to be considered in any case. The approach to the product calculation is now to set the estimated revenues at first and this in a conservative way. Subsequently, a sensitivity analysis on the gas price will help to find the least profit level to be achieved. Ideally, the result is the maximum price for natural gas the company should pay in order to secure calculation. Despite of the fact that product calculation is not the matter of this paper, a few initial words on that have been deemed necessary.

The following things have to be taken into account for a diligent natural gas hedging strategy:

- Being aware of the maximum price which should be paid
- Having access to up-to-date market information

- Being able to trade on short term
- Being able and ready to provide a certain level of securities to suppliers
- Setting the maximum quantity to be hedged
- Having an idea of future price development
- Setting buy triggers
- Being aware of the cost of balancing energy

The first point has already been discussed. Market information can be obtained through daily publications like the ICIS Heren report or through online accounts with real time indications of all of the available products. The latter one is appropriate when a company is certified as a trader and employs an own portfolio manager. In the company in this example this task does not justify a fulltime job so, as mentioned earlier, a service provider is looking after trading and balancing issues. In that case daily (instead of intraday) market information is sufficient and reasonable rather than using a costly online account.

It is crucial to use historical market information and to compare spot market and future prices, because the only two options are to remain on spot market prices or to buy forward. Anyone who has ever dealt with futures markets, be it stock, interest rate or currency futures knows, from its own observation, that the prices between the respective spot markets and the related futures markets for one and the same underlying may vary significantly depending on the maturity date of the closed transaction (immediately, early in the future, later in the future).

This is also the case with commodity futures: Each future on the same commodity has a different price, depending on the maturity date, which also differs from the current spot price. The prices for each individual futures maturity derives in each case from supply and demand of the market participants and thereby also indirectly from their expectations concerning the future price development for the observed raw material (www.boerse.de, 2018). The historical data should be collected and subsequently visualized in a graph as shown in Fig. 5.

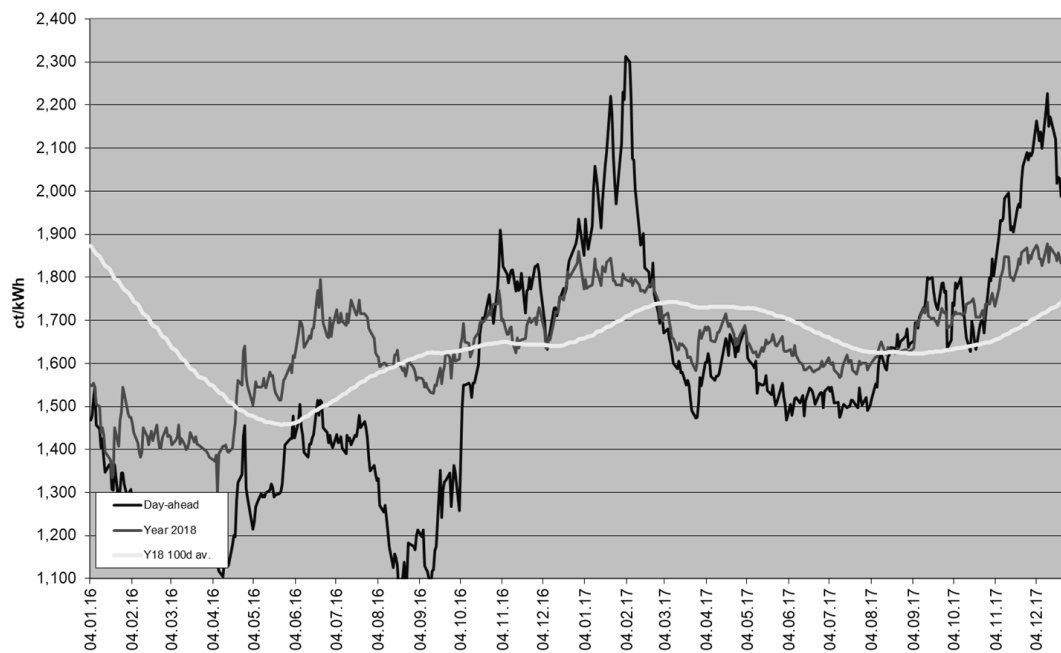


Figure 5. Development of Natural Gas Prices (Source: authors)

Depending on which constellation applies to a commodity at the moment, whether the prices for longer-term futures are lower or higher than for shorter periods, there is a contango (long-term prices higher than short-term ones) or a backwardation market for the opposite. Looking at the graph in Fig. 5, it is evident that contango and backwardation are basically changing, but most of the time a contango situation can be stated. This indicates, that a future buy in contango circumstances always comprises of a certain risk surcharge.

Another important information, which can be gained from historical data, is the 100d average line on a future contract, which can easily be implemented. In the example in Fig. 5 the 100d average line is based on the calendar year 2018 of natural gas future. Almost each time when the 100d average line has been crossed (from above or from below), longer periods of stable price range above / below the line occurred. Amongst traders who are acting based on chart techniques, a line crossing from above is a potential buy trigger and vice versa. If many traders comply with this ‘rule’ which often seems to be true, a self-fulfilling prophecy is created, which in turn enhances the reliability of the mentioned buy- / sell-trigger. However, some deeper knowledge of how the market is working and which conclusions are to be drawn is essential for a successful decision making on buying forward.

In terms of trading, say opening or closing of positions, it is crucial to be able to close a deal immediately after having obtained the relevant offer. If more time like an hour or more is necessary to confirm the offer (possibly due to a time consuming decision process) the offer might become a void or considerable risk surcharges might emerge. So the person to trade and buy should be vested with sufficient competencies to decide directly upon offer, thus, being not endangered to potential loss of the offer, because of the earlier mentioned volatility of the prices. Furthermore, funds or bank guarantees must be made available for the case a supplier has a demand, which is mostly dependent of how far the maturity date of the closed transaction is in the future and on the company’s creditability and/or credit rating.

The question of the size of the quantities to be hedged is a difficult one and the way to an answer can only be an approach. In the enterprise of our example, we already worked out a certain level of potential self-hedging by the development of the potash price (see Fig. 2). However, this is hardly to quantify, but the general conclusion is that the effect has more an impact on the long term than on the short one. In order to avoid over-hedging, each future purchase on a calendar year basis should be started with no more than 25% of the demand. This initially provides a reasonable cushion of risk avoidance, but on the other hand leaves enough headroom for self-hedging opportunities. The closer the maturity date of a contract comes, the more quantities could be hedged as now the self-hedging effect disappears and the volatility of the short-term futures as well as of the spot market prices warrants attention. In order to keep the balance between risk avoidance and preservation of opportunities, also short-term futures should be taken into consideration. Nevertheless, it must be borne in mind that every future contract has a take-or-pay automatism in the way that in each hour of the duration period the contracted load (like 10 MWh etc.) must be taken and paid. Due to technical reasons like unforeseen shut-downs, reduction of the output or maintenance periods of the power plant this is not constantly possible in practice. Consequently, the energy needs to be balanced, which was realized by the owner of the balance circle through the so-called balancing energy – surplus energy will be sold to the grid owner and missing energy will be purchased. As balancing energy in both directions is expensive, its dimension should be reduced to the absolute minimum when plannable. This must have an influence as well on the decision to what extent hedging should be brought. It is obvious that it is more expensive to sell 20 MWh as balancing energy for a certain period of time than 10 MWh. If there is, for example, a planned stop of the power plant, it is possible and even better to sell the surplus quantity actively on a day-ahead basis at the energy exchange.

The following illustration shows an optimized hedging portfolio compared the one displayed in Fig. 4.

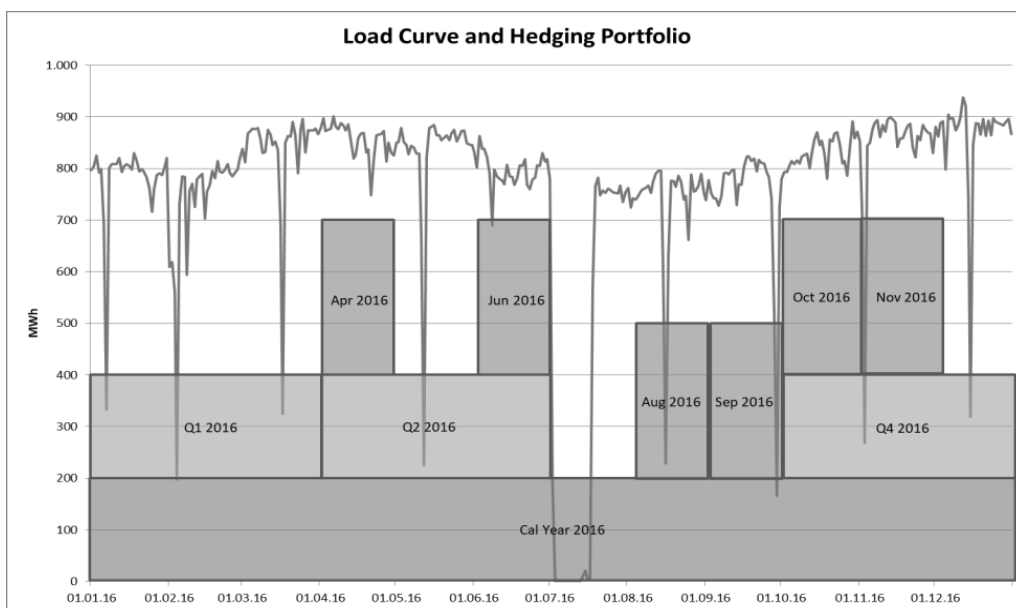


Figure 6. Load Curve and Hedging Portfolio (Source: authors)

This optimized model considers quarterly and monthly futures rather than just the calendar-year product. As already mentioned, the deep down peaks in the load curve are planned maintenance stops of the facility so this fact provides a good opportunity for budgeting the gas quantities needed. Furthermore, the volatility between 600 MWh and 900 MWh warrants some attention. Selling surplus (or non-used) future gas quantities day-by-day is very risky when it comes to prices because demand and supply may vary frequently. In each case, selling and buying out of a non-planned situation on the spot-market involves trading cost on both of the energy exchange and the grid, which should be avoided or at least minimized to its absolute minimum level wherever possible.

Consequently, it makes sense to leave out or working around the mentioned area of volatility when thinking about hedging. Coming back to the model in Fig. 4, the calendar-year product shows a half month selling situation in July. As this is a planned stop, the surplus quantity can be sold in a controlled way, thus, avoiding pricewise uncontrolled balancing. The same is true for the comparable events crossing the quarterly and monthly products.

The volatility on the top-end of the curve is mirroring the operational situation of a power plant, which is influenced by various factors like power and heat demand from the production plant, smaller incidents and even ambient temperatures. If there are some deeper dips like by the end of January / beginning of February, analysis is necessary whether this was a smaller one-off effect or a typical situation, which can also be assumed for the future.

6 Open Questions and Unsolved Issues

One question that has not been answered is the risk to the company from risk aggregation in the context of natural gas purchase. Adding up the static risks of all risks involved, one certainly arrives at a value that the company cannot bear. Since it is unlikely that all risks occur together, it will probably not come to a default. The value of the static risk is, therefore, only suitable for the individual consideration of the single risks.

The question of assessing soft risks has also remained unanswered, although it is precisely this that can pose a high risk when aggregated. Nevertheless, these soft risks must be taken into account and, therefore, require at least close monitoring.

Furthermore, it was kept open to associate risk management with opportunity management. A risk has the property of being permanently latent. An opportunity usually results from a short-term favorable situation, hence, is not constantly present. Therefore, an opportunity search decoupled from risk management should take place.

The question about the risk owners has not been stressed. These responsibilities can only be clarified after implementation of the relevant part of the risk management. First, the members of the Risk Committee need to appoint risk owners in their subordinate areas. But that's not enough. Due to risk interdependencies and overlaps in risk categories, responsibilities may shift for a number of single risks. For example, the default risk of a natural gas supplier is present in the technical department. However, since it is also a financial risk, it can also be assigned to the financial division. Thus, responsibilities cannot be determined solely by the structure of the organizational chart. This is just an auxiliary construction.

Summary

Hedging is not a kind of speculation, but may help to reduce speculation (Rotter et al., 2016). It is a fact that the current status of increasing volatility of commodity markets associated with rapid market cycles, the professional application of hedging instruments within the broad risk management system of a company is an essential element to preserve competitiveness and sustainability as a result of it.

On the practical side, some experience and expertise is crucial in order to find the right balance between risk and opportunity. To do nothing on this is just speculation in the direction that prices will always go down. To hedge at 100% means the other way around. There is no universal recipe for the right way in every kind of business. But coming from the product calculation as a driver and taking it from there should not be misleading. Another point is to always have in mind the core business of a company. Taking the example enterprise, the core business is producing salt – and not gaining profit through commodity – or financial instruments transactions on the exchanges. Even when a back test of past hedging activities provides that a better solution could have been found this is more or less hind side and needs detail analysis whether or not lessons from this can be learnt. In any case, there is a premium to pay when taking out risks. The trick is to keep that premium as low as possible.

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