An overview of Gas Sale Agreement's framework and interruption of supply

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Abstract

The purpose of this article is to draft an overview on gas contract which is the starting point for any discussion concerning gas market and gas market security in supply. It is widely known that security of energy supply is the most important issue of the new millennium and assuring the security of supply is vital for our society overall for such countries (i.e. Serbia) which are forced to import the whole necessity of domestic energy demand. Hence, before dealing with interruption of gas supply it is preliminary important to analyze (and understand) the framework of Gas Sale Agreement (GSA) well recognized as the main contract among gas market agreements. The authors will stress the framework (typically legal) of GSA and through the outcome of the study they will try to underline what parties should put in mind before signing a final, binding agreement and, at the same time, to be successful in attempting to minimize the risk of disruption.

Keywords: gas industry, negotiation, gas agreement, interruption of gas supply.

1. Introduction. The gas market and its importance

Natural gas was long considered to be a minor resource within the Petroleum Industry and not without reason. In comparison to crude oil, Net–backs[1] to Produces were significantly lower. Additional investment was need in the infrastructure for transportation and utilization. There was higher degree of regulatory intervention, particularly in the form of price controls.

This is not the case today. As a matter of fact, experience has shown that the formula for a successful Gas industry has four elements.

First, a large indigenous supply is necessary to insure security of supply[2]. Secondly, the industry must engage in aggressive marketing and expansion of pipeline systems. Thirdly, the presence of price constraints (regulatory or market) that make gas the lowest cost fuel. Finally, deregulation of the industry after market penetration to provide incentive for both exploration and cross-border trade.

Further, there are several reasons why natural gas resources are commanding world-wide attention. Assuming the current pace of consumption and that oil is replaced completely by natural gas, there are sufficient proved reserves of natural gas for the next 35 years. If the combined consumption of oil and natural gas were held at present levels of use, natural gas use could continue for 56 years[3]. Additionally, while 77 % percent of oil reserves[4]

[1] The effective wellhead price (wellhead price is known as the price received by the producer for sales at the well) to the product of natural gas, based on the downstream market price for the natural gas less the charges for delivering the natural gas to market.

[2] There are countries – and Serbia is one of them – which are totally dependent on import of gas, regardless of the specific use of gas (i.e. for generating electric energy or supply to electric plant), because they do not have domestic reserves and obviously it is not easy to compensate such lack in short term.

[3] Source: BP Statistical Review 2004.

[4] Remind that reserves are categorized according the limits of economic recovery by using the 3-P (Proved, Probable and Potential) methodology of the Society of

are located in the Gulf, substantial proven gas reserves are situated in other regions.

2. Gas Sale Agreement

The Gas Sale Agreement (GSA) is the principle contract within gas industry. Despite each GSA is unique according to the extent of reserves, price5, volume and point-of-delivery6, there are two basic approaches.

The first approach is to use a Supply or Requirements' contract. It is considered that a supply contract favours the Purchaser because the seller is obligated to secure additional reserves in the event that the initial source of supply is not adequate.

The alternate (and second) approach is a Depletion or Dedication of Reserves contract. A Depletion contract is considered to favour the Seller because the delivery obligation is specific to a formation or field. If the reserves are not adequate, the Seller will not be in breach of this delivery obligation.

GSA's are also categorized by the duration of the sales obligation.

Long–term contracts will have a term of greater then ten years, with 20-25 five years being common. Conversely, Spot contracts have duration of 30 days or less and are more common in mature markets.

The term and conditions of a GSA also vary depending upon whether the gas is delivered by pipeline or as LNG. There is a trend towards regionalization in contracts (North Sea, North America, etc). Government and trade associations, such as Gas Industry Supply Board (GISB) and the international Swaps and Derivatives Association of International Petroleum Negotiator (AIPN) also publishes a model GSA. Nevertheless, there is no single industry precedent and each contract is the result of the unique circumstances.

2.1. The obligation of the parties

Sellers and Buyers divide their respective obligations under these contracts between two categories. Firm obligations are the first category, meaning one of the parties holds an entitlement or commitment. The beneficiary has an enforceable entitlement and there are legal consequences if the contract is not performed[7].

Petroleum Engineers. Depending upon the reliability of well control data, the extent of reserves assigned to each category is stated either in Deterministic or Probabilistic terms. Usually only fields located in North America are given single or Deterministic values; whereas fields in other parts of the world have reserves expressed in Probabilistic terms (High = 90 percent, Low = 10 percent and Most Likely = 50 percent).

[5] Pricing provisions can be complicated. Under indefinite Pricing, the price will be determined according to external references such as alternate fuels, contracts or markets. Sellers favour pricing clauses that maintain parity with other fuels, gas Producers and inflation. Where competing fuels are referenced, the gas price is set according to energy conversion factors so that gas is usually priced less than fuel oil and higher then coal. Unless the Seller is responsible for gas delivery, prices are at the Tailgate (Tailgate is the point where a gas transmission pipeline is interconnected to a gas processing plant) of the gas processing plant. The Seller deducts the cost of field gathering and processing in order to determine the Net-back price at the Wellhead.

[6] It is essential that the contract designate a Delivery Point for both the transfer of physical control over the gas as well as transfer of title. Deliveries may be at the Wellhead, at an interconnection point on gathering line, at the Tailgate of a processing plant or at the City Gate (City Gate is known as location at which natural gas ownership passes from one party to another, neither of which is the ultimate consumer; the point at which interstate and intrastate pipelines sell and deliver natural gas to local distribution companies). Title and risk of loss passes from the Seller to the Buyer at the Delivery Point. This clause may also address physical pressure at which the gas enters the Buyer's system or other Delivery Point. Because gas pressures must be compatible between the pipeline system and the receiving station. This issue may also require the Buyer or Seller to install facilities to adjust the pressure as needed for delivery. Delivery Point pressure may also be covered in the specifications for gas quality.

[7] Something similar we find according to civil law experience where there is the difference among "Result obligation" and "Means Obligation". In the case of "Result Obligation" the interested party has to pursue the outcome set out by the contract to fulfil the performance; instead by second type the interested party has to act just in fair, diligent and professional manner in order to avoid breach of contract (the extent of diligence depend on professionalism's level requested case by case i.e. the professionalism of a lawyer's obligation is higher than an obligation where the party has less qualification. In other words the lawyer has not obliged to win the case but it is obliged to assure to his client the best diligence effort).

Best Endeavour's/Efforts[8] is the second category where the party, usually the Producer, need only act in a commercially reasonable manner. In this case, the Buyer has neither an entitlement nor enforceable commitment and accepts the risk that delivery will not take place.

The rate of delivery is most of significant obligation for the Seller and entitlement for the Buyer.

Delivery obligation has been measured according to annual, maximum daily or maximum hourly quantities. Some variation in this obligation may also to be made to accommodate seasonal or other periodic changes by either increasing quantities or by deferring cargoes, as is the case for LNG.

Other aspects of the Seller's delivery obligation are the point-of-delivery, delivery pressure and minimum quality specifications.

A commitment from the Buyer to Take-or-Pay (TOP)[9] for a minimum annual quantity or Minimum Bill is closely related to the delivery obligations. It is common for a Purchaser with a TOP obligation to seek a reciprocal right to Make-up10 this gas by requesting later delivery of possibly a refund of the payment later in the life of the contact. If the contract is for gas transportation, there can be a similar clause referred to as Ship-or-Pay, usually without Make-up rights.

Broadly speaking, in long – term contract the main drawback is the inflexibility in the face of demand and supply fluctuation.

To mitigate this problem, parties will therefore stipulate specific clauses. Such a clause in practice could be an initial price as a floor on the value of the contract. It could be argued that prices are rigid downward, but they can arise following price escalators, like predefined increases per year or petroleum price index.

Sometimes gas prices rise independently to economic rules and in such cases the growth is the consequence of geopolitical decisions where the price is used as a tool to be successful among international conflicts. In other cases the price rises just because the producer countries consciously prefer do not sell gas in order to pursue the maximum speculation.

A further solution is the redetermination clauses which permit renegotiation of the terms of the contract at predetermined intervals.

Apart from these specific price provisions, the non – pricing clause that has received much attention in the economic literature is the TOP (take-or-pay) which, as it is mentioned above, requires purchasers to pay for a specified minimum quantity of output, even if delivery is not taken.

Nowadays, there are two complementary analyses of take-or-pay provisions: the model of Crocker and Masten (1985, 1988, 1996) and that of Hubbard and Weiner (1986, 1991). While these latter authors interpret TOP clauses as risk-sharing instruments, Crocker and Masten argue that TOP obligations can be viewed "as a mechanism for effecting appropriate incentives for contractual performance".

2.2. Special issues

After a brief introduction to GSA features and main parties obligation it is now possible to point out some special issues arise among GSA in general and GSA's parties.

Preliminary it is important to underline that as a fuel, natural gas, is purchased according to its energy value, but is produced and transported on a volumetric basis. This quandary is resolved by

[8] Service offered to customers under rate schedules or contracts that anticipate and permit some interruption on short notice, generally in peak-load seasons, by reason of the claims of firm service customers.

[9] The Buyer's minimum purchase obligation may be set at a percentage of ACQ (Annual Contract Quantity) unless the contract contains a Minimum Bill clause or requires payment of an annual Reservation Charge. If the Buyer does not take the requisite quantity, there is a deficiency and a TOP obligation is triggered. Correspondingly, if the Seller is unable to deliver the contract quantity or if the parties are experiencing Force Majeure, the Buyer is untitled to a reduction of TOP.

As a concession to the Buyer, the amount of gas attributable to the payment made for the deficiency can be subject to Make-up in subsequent years. Make-up rights can only be exercised once the TOP obligation for that year has been satisfied. Make-up rights can be stated either as a financial amount that is recovered at prevailing contract prices when the gas is delivered or a quantity of gas. In the later case, it will be necessary to adopt a system of inventory control to determine whether Make-up is on the basis of Last-in-First-Out (LIFO) or First-in-First-Out (FIFO) in order to properly account for the quantity of gas that is available as Make-up.

[10] A clause in a long-term gas sales contract that allows the buyer to call for delivery of gas paid for under a take-or-pay clause.

adopting measurement units that are energy–equivalent such as Gigajoule.

Moreover, while a long-term GSA covers several years, it is performed in monthly instalments where obligations are stated in daily or hourly intervals. In this respect, a GSA is treated as an Instalment Contract, where the Buyer's rights are Entitlements rather than a legal interest in the gas held in the reservoir.

One of the most perplexing issues is that the price formula is agreed before the Cost of supply is actually known. Capital expenditures can represent as much as 90 percent of the cost for supplying gas.

Sellers have taken a variety of approaches towards this issue.

Buyers have agreed to use construction cost estimates in conjunction with engineering reviews as the basis for the cost of supply.

Another approach is to conduct a post-facto review of costs.

A third approach is to apply rate of return formulas that adjust prices in order to maintain contact rates for the return according to costs and quantities. A return on rate base (RORB) methodology administered by a regulatory body can be used as well.

Under the RORB approach, an administrative proceeding is conducted to determine if the price is to be adjusted.

Sellers and Buyers take different approaches when determining the price.

Buyers look at the cost of alternative fuels. In addition to price stability, they want either a discount or to achieve an overall reduction in fuel costs over the life of the contract. Sellers look at the cost of production and try to achieve a Net-back price that will yield a satisfactory return on overall investment.

The best method for resolving this difference is to exchange economic models in order for each party to understand the assumptions about development costs and market dynamics that are being made by their counterpart.

Some contracts attempt to balance the Buyer's TOP obligation of the inclusion of a send-or-pay obligation that places the Seller financially at risk for non-delivery. In some cases, the Seller will accept responsibility for the difference in the price of gas in the contact and the higher cost of any alternate fuel obtained by the Buyer.

Gas is paid for in arrears, after it has been delivered and utilized. As an instalment contract, non-payment for a monthly invoice will not be regarded as a material breach of contract that gives rise to the right of determination.

The GSA will include default provisions that give the Seller the right to suspend delivery for non-payment of a monthly invoice. However, under most default clauses there will be a 30 - day period before action can taken. This still leaves a Seller with an exposure of one to two months of previously delivered gas before it can suspend or terminate the GSA for non-payment, in some cases, Buyer that are not considered to be creditworthy must either pay in advance, post a stand-by letter of credit or arrange some other form of credit support such as a Host Government guarantee.

The Buyer's remedy for delivery of non-specification gas may be limited to rejection. This is the traditional remedy available under Sales of Goods Acts, but is not well-suited where the trade is in natural gas that cannot be held for re-delivery to the Seller if it is defective. Also, the number for minimum quality specifications can mean that either the gas was low in thermal energy or contained a level of contaminants that could lead to corrosion of equipment. Some contracts address this issue by offering price discounts and allowing TOP credit for non-specification gas taken by the Buyer.

A better approach would be to obligate the Seller to adjust gas plant operating efficiencies if the gas delivered fails to meet contract specifications for two or more consecutive months in the contract year.

Liberalized markets discourage the use of joint selling arrangements and long-term contracts, which are considered important to the security of supply. These issues tend to arise under competition laws. The best solution is providing for exemptions where it can be demonstrated that such arrangements will in fact promote public welfare.

Finally, in unbundled gas markets where supply is separated from transportation service, it may not be possible for a Seller to secure a contract for transportation services that has the same duration as the GSA.

3. Interruption in supply

After stressing GSA's main features and special issues arise by seller and buyer respective performances the authors will try to make an overview on interruption in supply.

The seller will usually become liable to pay liquidated damages to the buyer if there is an interruption in gas supply and the seller is not excused, which may be for reasons such as the buyer's failure to take delivery or Force Majeure.

English law requires liquidated damages to represent a genuine pre-estimate of the loss that the parties may suffer. Courts will be sceptical of a very high and arbitrary figure imposed by way of liquidated damages.

Where the buyer has access to alternative energy supplies, it would expect liquidated damages to cover the additional cost of those alternative supplies.

Where there is no viable alternative source of fuel, the buyer will argue that the liquidated damages ought to compensate it for the lost revenue under the downstream off-take contract, as well as the costs involved with shutting down and starting up the buyer's plant.

As an alternative, the seller may be obliged, or have the option to, supply free\discounted gas in a subsequent period and this gas will be sold at the shortfall gas price. It is also not unusual for GSAs to provide for unliquidated damages, subject to an overall limit upon the seller's liability.

The buyer should not be prevented from seeking supply of gas from alternative sources if supply under the GSA is interrupted. Usually reasonable conditions will be imposed, such as notice to the original seller and the requirement to resort to quantities that may be held in storage. The conditions should not be so onerous so as to expose the buyer to the risk of interrupting operation of the downstream project.

This can be a difficult issue for negotiation.

Buyers may be forced to commit to alternative supply arrangements for a fixed period, which can be difficult to estimate and match against the likely interruption under the primary GSA.

In the event of interruption of supply, there may be an option in favour of either the buyer or the seller to make-up the shortfall in a subsequent period.

3.1. Extent of risk

Title and risk of the gas is passed to the buyer at the delivery point, which be a precisely defined geographical location.

The delivery point may be at the sellers gas production facility, the buyers reception facility, or the point of entry of exit of a multi-user pipeline. Some GSAs specify alternative delivery points which will apply in different specified circumstances.

The key difference between the alternatives relates to which party will bear the risk of transportation of the gas, where the transport arrangements will be undertaken by a third party, it is important to consider the extent to which the GSA and the transportation agreement are back-to-back, particularly in relation to supply interruptions. Neither the buyer nor seller will wish to be exposed to mismatched risk between the transport agreement and the GSA.

Regardless of the delivery point adopted the transportation mechanics should be checked to ensure a suitable procedure that will work in practice.

3.2. Force Majeure

GSA's typically contain Force Majeure provisions, like many other commercial agreement. Occurrence of Force Majeure events excuses the party under Force Majeure from the failure to perform.

Force Majeure is usually defined as Acts of God over which the parties have no control. The definition is likely to include strikes, wars, riots, epidemics, landslides, floods, explosion, line freeze – ups and similar events. Force Majeure issues become complex when upsets occur at facilities operated by parties who are not participants in the contract.

Force Majeure clauses may be written in two basic ways. First, natural events and governmental actions can be listed as acceptable causes for invoking Force Majeure. Secondly, the clause can broadly describe the events that are either not reasonably within the control of the party claiming suspension or that the party is unable to prevent or overcome the condition by the exercise of due diligence.

Under this approach, delays in acquiring right-of-way grants, permits or licenses, the inability to

acquire materials and supplies and maintenance of facilities are excluded.

Often, the Force Majeure clause does not address the question of whether the duration of the contract is extended according to the time period that parties were prevented from performing the contract. Considering that two different interpretations are possible, the potential ambiguity should be removed by allowing the duration of actual contract performance to be extended for a period that is equivalent to the duration of Force Majeure.

Since third parties are not in privity of contract, events that prevent them from performing processing or transportation operations will not be regarded as Force Majeure. Alcor ltd. v. Continental Energy Marketing Ltd. In these situations, the definition of Force Majeure can be extended to cover third party services, particularly if they have been arranged on the basis of firm service or the reservation of capacity.

3.3. Disruption of supply

The happening of certain clauses (e.g. non-payment or under delivery) will allow one party to deliver and default notice to the defaulting party. If the event is not remedied in the time given, the non-defaulting party may suspend performance. When the events become more serious, the right to terminate accrues.

Termination events will usually include extended supply interruptions, non-payment of a material amount, delivery of off-specification gas, breach of a material obligation, insolvency, change in control of either party, extended events of force majeure, abandonment, termination of certain project documents\e.g. generating licence, off-take or transportation contract. The termination events should be material and where applicable, there should be reasonable cure periods.

Default caused by certain specified events will be excused e.g. default of one party caused by the other, force majeure, scheduled maintenance, emergency shut-down.

If the buyer terminates for cause, it will usually have the right to seek compensation for the extra cost incurred in obtaining gas from an alternative source. If the buyer terminates for cause, it will usually be entitled to compensation – often calculated as a net present value of take-or-pay charges.

There should be a provision specifying that termination shall not affect any accrued rights or obligations and which provisions of the GSA shall survive termination e.g. make-up rights for a limited period, liabilities, confidentiality, dispute resolution.

4. Conclusions

Both Government and industry argue that to ensure security of gas, a diversity of supply sources and entry points into the market is essential. For example there are projects planned to increase the EU's gas import and storage capacity, and long-term import agreements have been established with companies based or operating in several key gas producing countries.

Many European Governments believe that security of gas supply is achieved by having a fully marked for gas. This view is also supported by the European Commission and in June 2003 a new EU Gas Directive was adopted by the member states. The objective is to establish an integrated, liberalized European gas market with common rules on storage, transmission, supply and distribution of natural gas.

Particularly, there is criticism in order to consider the minimum period - level (two months) of gas storage provided by EU Directive sufficient to assure the security of gas supply in case of disruption. In such cases, i.e. as Serbia, the sufficient period – level to insure a gas storage able guarantee security of gas supply should be at least 12 months and Ministry of Mining and Energy of Serbia is already working on organize a gas storage with such capacity.

Nevertheless there is debate about whether a liberalized market will enhance or diminish security of supply.

The total liberalization of gas market has to be carry on maintaining a steady public monitoring in assuring the best level of efficiency of way of managing private distributors. Latter have always to keep in mind they are working on service that is vital for society and because of that they "must" always put before society's interest to the business's private interest.

In Serbian experience the respect of society's interest is pursued providing strict rules for top – managers of private companies in distribution market and particularly it is not allow to assure bonus to managers if, before, they do not show that

distribution company has enough reserves to guarantee the security of supply. If the companies not fulfil such rule they seriously risk to lose the license - authorization for being on the market distribution.

The problem facing the gas industry, further, in the short term is not accessibility to gas but getting the gas to markets.

It is estimated that 70 % of the world's gas reserves lie within transportable distance (5,000 km) of Europe. Some commentators worry that some gas is likely to come from countries which may be less politically and economically stable than purchaser countries. However, countries supplying energy are dependent on the buying countries so it is in their interest to establish trade agreements with importing countries to ensure ready export markets. For example, over a 40 year period Algeria showed that it was a reliable gas supply to UK. The UK has also recently signed a long-term gas import agreement with Norway, and several UK companies have long-term gas and LNG contracts with suppliers in major gas producing countries such as the Netherlands, Malaysia and Qatar. In future, Russia, Algeria and Egypt are expected to become significant gas exporters to Europe.

Last but not least, it is important to point out that the issue of establishing agreements with gas producing countries needs to be managed accurately with the global gas "Peak". As a matter of fact, analysts predict that the global gas production "Peak" will occur by 2020–2030 (Association for the Study of Peak Oil and Gas, www.peakoil.net). Production will continue after this time, but at lower rates. As global gas supplies decline it may become economically viable to switch to other forms of energy.

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