

# Gas Price Arbitration in The Light of Experts' Role: A Conceptual Analysis with a Reference to Iran–Turkey Case

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## ARTICLE INFO

### Keywords:

Gas Price Arbitration  
Gas Price Expert  
Determination  
Role of Expert  
Iran–Turkey Gas Contract  
Arbitrators in Gas Industry

**Received:** March 10, 2019

**Revised:** May 11, 2019

**Accepted:** June 01, 2019

## ABSTRACT

Unlike many arbitrations, the arbitration procedure for price reviews in gas industry contracts is not based on allegations that one party has breached a contract or otherwise committed a legal wrong. Instead, arbitrators are asked to determine whether the economics of a contract has been changed in the market and thus should be adjusted; if so, a new price formula should be established. Due to the complexity of the revision of gas prices, the gas experts have significant role in these arbitrations. Regarding the role of gas experts, gas price arbitrations have specific nature. In this article, the nature of these arbitrations is examined to establish whether they are arbitration or expert determination as one of alternative dispute resolutions (ADR). Iran has the second proven natural gas resources worldwide and is the third natural gas producer in the world, so Iran–Turkey case will come under scrutiny in this article.

## 1. Introduction

Long-term gas sale and purchase agreements (GSPAs) are often concluded for more than 20 years. Owing to the long-term nature of GSPAs, there is no fixed price in these contracts. Contractual price can be adjusted to reflect changes in the market. For this reason, there is a price revision clause in GSPAs. In price revision clauses, the trigger events are determined. Price review occurs when it is established that the review has been triggered. For the parties that are unable to settle a price review request amicably between themselves, arbitration is available. It is essential for gas price review that arbitrators should have an appropriate comprehension of commercial nature of the dispute. Furthermore, expert advice will often be used

extensively in these arbitrations, particularly in establishing the fact that the price review has been triggered, and a significant/material change has occurred in the market.

This article aims first to provide a picture of the specific nature and concept of gas price review arbitrations by examining the requirements of price review clauses. The role of arbitrators as well as the role of expert(s) will then be assessed. In examining the role of expert(s), the interaction between gas price arbitrations and the expert will be carefully reviewed. Finally, Iran–Turkey case will be generally discussed as a relevant example.

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## 2. Price Review Provision

In performing oil and gas contracts, when unpredictable changes of the circumstances distort economic equilibrium of the contract, contract adjustment is the best solution. Price revision provision is the core of contract adjustment.

Price review provisions provide the flexibility in long-term gas sales agreements to deal with the risks associated with changing markets (Holland & Ashley, 2012: 32). The main rationale of the price review provisions is to provide both parties with a tool for restoring the future of the economic balance of the contract as it was agreed in the past. If this economic balance becomes distorted, the price review provision serves to reset it by adjusting the price provisions (Leijten & Vries Lentsch, 2014: 33).

According to price review provision, there is a staged approach for reviewing the price. First, the party seeking a price review must serve a notice which complies with the provisions of the contract. This will normally be required to set out the trigger event which is relied on as giving rise to the need for a revision to the price, and the specific revision which is sought. Second, there will be a prescribed negotiation period in which the parties should seek to agree an appropriate resolution. If this is not possible, at the third stage, the dispute will be referred to an arbitral tribunal which will decide how the price should be revised to reflect the change that has occurred if it is established that the price review was properly triggered. The precise scope of what the tribunal must decide, and what information it should have, will usually be prescribed by the price review provision to some extent (Baily & Lidgate, 2014: 142).

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### 2.1. Criteria for Price Review

A price review provision will usually, but not always, require condition(s) to be satisfied before a review can take place. These conditions are sometimes referred to as trigger events (Holland & Ashley, 2012: 37). A typical price review provision will provide for period or special triggers, or a combination of both. Under a periodic trigger, the parties of the contract can agree either that the price will be automatically reviewed at certain dates during the life of a contract, i.e. every three years, or that the parties have the right to review the price at certain milestones. To review the contractual price is the less complex method. In a special trigger, the price review

will be done when the following conditions are met. First, circumstances have occurred outside the control of the parties. Second, the mentioned circumstances have induced a significant or material change in the market. Third, such market changes were unforeseeable. The parties of the contract will often combine a periodic trigger with a special trigger or include only a special trigger, which allows parties to respond more quickly to changes in the market (McNair Chambers, 2013: 3).

Some criteria have to be satisfied in order for a party to claim a price review leading to an adjustment of the price provisions. The first criterion is changes in the economic circumstances. Changes in the value of gas and the ability to economically market the gas are the second and third criteria. They will be explained below.

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#### a. Changes in the economic circumstances

The first requirement of a typical price review clause is that the economic circumstances have changed compared with what is mentioned in the price provisions of the contract. A party requesting the price provision will have to prove some issues. First, it must be proven that the change in the economic circumstances has taken place within the review period which is called “time element”. Second, the significance of the changes that is known as “weight element” should be identified. Third, the “geographical element” must also be proven providing that the change must have occurred in the buyer’s country or market. Finally, it must be shown that the change is outside of the control of the parties which is known as “influence element” (Leijten and Vries Lentsch, 2014: 37).

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#### b. Changes in the value of gas

It may be perceived from the wording of a typical price review clause that “the value of gas” refers to (i) the value in the market of the buyer, with or without reference to the end-user market and (ii) the value as it can be obtained, directly or indirectly, by a prudent and efficient gas company. Some parties have argued that the wording of the price review provision refers to the value of gas as it can actually be obtained. Concerning that, the arbitral tribunal in the final award of ICC case 13504<sup>1</sup> provided that:

In the absence of a particular provision in the [contract] as to the meaning of “the value of natural gas”, the arbitral tribunal considers that this expression should be interpreted as referring to the

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<sup>1</sup> Final Award in Case 13504, in ICC International Court of Arbitration Bulletin, Vol 20/2, 2009, p 99.



ordinary market value of gas, and that the market value of gas is to be determined on the basis of prices obtained or obtainable in actual transactions in the various market segments constituting the end-user market of the buyer.

The value obtained in the market is the payment/revenue/price which the supplier receives from the entirety of all end customers. The principle that any value determination under [the price review clause] has ultimately to be checked against and is finally determined by the prices actually obtained or obtainable in the market was acknowledged by respondent.

Finally, nowadays the parties to the contract claim that the wording of the price review provision allows for a shift from the valuation of gas versus alternative fuels to the valuation of gas versus gas. By gas-to-gas competition approach, the parties can determine the value of gas based on the value that the buyer can actually obtain gas in its market, which is argued that it is currently determined by the prices on the spot market; thus, an obtainability test is applicable instead of technical market value (Leijten & Vries Lentsch, 2014: 41-43).

### **c. Ability to economically market gas**

Typically, there is an “in any case” clause in price review provisions providing that in any case the price provisions of the contract will allow the buyer to economically market the gas. In general, there is no explanation of the term “economically market” in any case clause. In the buyers’ point of view, this clause provides a margin guarantee. They claim that the fact that they should have the ability to economically market the gas means that the buyer should always be able to make a margin. Obviously, the sort of clause provides that, in the end, the gas should be marketable. It is unclear whether this means that a positive margin should be obtained at all times over the duration of the contract. According to contract’s wording, arguments can be made in both ways. That is to say that buyers could argue that the term “economically” refers to the buyer’s ability to obtain a positive margin. By contrast, sellers could claim that in the absence of a specific stipulation, the contract cannot be read to provide a positive margin guarantee.

Eventually, in assessing whether in any case clause can provide a (positive) margin guarantee, the tribunals and parties in each case should rely on the negotiation history of the contract and previous price reviews (Leijten & Vries Lentsch, 2014: 43–45).

## **2.2. Notice and Negotiation Period**

Price review provisions typically require the party seeking a price review to serve a notice, which is commonly known as the “price review notice”, setting out the trigger event(s) that it believes to establish a right to a price review (Levy, 2014: 15). In practice, the party requesting a price review does so in a letter to the other party. This letter is referred to as the “trigger letter”. Although the letter becomes relevant once the parties are in arbitration, its validity is crucial to start a price review and to set the scene for the requested review (Leijten & Vries Lentsch, 2014: 34).

There may be strict requirements in relation to the notice which must be complied with. For instance, it may be a requirement to include the revised price formula which the requesting party contends that it is appropriate in the light of the significant change and to add reasonably detailed information explaining the analysis based on which the party seeking the price review claims that a significant change has occurred in circumstances (Baily & Lidgate, 2014: 143). Mostly, it is also provided in the contracts that the price review notice should be written.

A price review provision may provide that each of the parties can first request a price review on a specific date and then, for example, every following three years and so on until the end of the contract. In each case the party that wishes to request a price review will have to send its trigger letter to the other party before the trigger date. A request for a price review sent after the relevant trigger date is likely to be considered invalid (Leijten & Vries Lentsch, 2014: 35).

Following the service of a compliant notice, the price review clause is likely to provide for a number of days in which the parties may negotiate (Baily & Lidgate, 2014: 144). Although the period of negotiations depends on parties’ agreement, it usually varies from three to six months. Price review clauses will normally require the parties to negotiate for a specified period of time, following the service of a price review notice before the arbitration can be commenced (Sparling, Magnin, Morton, Gilbert & Farren, 2016: 6). If the parties could not reach an agreement through the negotiation period, the dispute typically would be referred to arbitration.

## **3. Concept of Gas Price Arbitrations**

Arbitration is the most common dispute resolution method in energy industry, particularly in oil and gas contracts. Due to the existence of an external element in

energy industry, i.e. foreign or international element, the aforesaid arbitrations are characterized as international commercial arbitration. In energy arbitrations, like other international commercial arbitrations, some parties wish to have their proceedings administered by a particular institution, for example, London Court of International Arbitration (LCIA), or International Chambers of Commerce (ICC). Others opt for ad hoc arbitration, which they conduct on their own agreed arbitration procedures, typically driven from the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL), which are suited for noninstitutional proceedings (Ason, 2019: 10).

In particular, gas price arbitrations are one of the international commercial arbitrations in which the parties to a long-term gas supply/sale and purchase agreement decide to refer the revision of contractual price to arbitrator(s). Considering the sensitive nature of pricing arrangements and market information in gas price reviews, parties of the agreement prefer arbitration for pricing disputes due to its flexibility, the full privacy of the process, and the confidentiality of the outcome, which they typically request. As complex and high-stakes disputes, gas price review arbitrations are typically heard by three arbitrators forming an “arbitral tribunal” rather than by a sole arbitrator. There are several different methods of appointing an arbitral tribunal but the parties typically choose arbitrators on their own on the basis of careful due diligence of the prior experience of a particular candidate. The two party-appointed arbitrators then choose the third arbitrator (“chair” or “umpire”) who presides over the arbitration. In the alternative, the parties sometimes seek the assistance of an arbitral institution which will act as an appointing authority. The role of an arbitral institution in arbitral proceedings and opting for ad hoc arbitration depend on the preferences of the parties to the contract (Ason, 2019:10).

The contractual basis of referring the price revision to arbitration is arbitration clause. The revision of the contractual price may be referred to arbitration by an arbitration clause/agreement or arbitration agreement. In drafting an arbitration clause in the gas sale and purchase agreement (GSPA), it may be helpful to consider the following points inter alia:

- Whether the arbitration is to be institutional, e.g. LCIA, ICC, or ad hoc, i.e. with no administering institution, and, if ad hoc, the mutually agreed procedural rules that will apply.
- The seat of the arbitration as this will be the legal home of the arbitration and will have an impact on certain aspects of the arbitration.
- The costs and expenditures of arbitration to be tolerated by one party or shared by the parties in the contract.
- Whether disputes will be referred to a sole arbitrator or a three-member tribunal and whether the arbitrator(s) should have any particular qualifications.
- The target time scale for the arbitration. Given that the market can change during the process and price reviews may be triggered every few years, it may be required to highlight the need for the determination to be made in good time.
- In relation to evidence, it is common to see provisions that each party must advance evidence to substantiate its own case, but it is rare to require a party to provide information that the other party may need to substantiate its position. In arbitration, parties from different legal systems may have differing expectations of the degree to which they may require the other party to produce information. Consequently, it may be helpful to make express provision on this particularly if it is likely that there is an asymmetry between the parties in their access to information. For instance, a buyer is more likely to have access to information about the market in which it participates than a seller.
- Arbitration is a private process in which only the parties to the GSPA are entitled to participate. If the confidentiality of the process and the award are important, they should be addressed explicitly in the GSPA (Sparling, Magnin, Morton, Gilbert & Farren, 2016: 10–11). Generally, confidentiality is a principle governing international commercial arbitrations, so it is applicable to all commercial disputes whether it is mentioned in the contract or not.

In the price review provisions of the GSPA, arbitrators are often not dispute resolvers in gas price review arbitrations. They focus on examining the trigger events provided in the contract and by the affirmation of the occurrence of trigger events, they will revise the contractual price formula. In this regard, they seek a commercial and rationale solution which assists the parties to continue their long-term relationship. Therefore, the arbitrators endeavor to adjust the price with experts’ assistance by applying a commercial approach.



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## 4. The Role of Arbitrators in Gas Price Review Arbitrations

The arbitral tribunal has two main roles in the arbitration process. First it should determine whether the trigger events have taken place. If the trigger events occur, on the next step, it will revise the contractual price formula. Concerning the tribunal's role, the authority of arbitrators has been highlighted in price revision clause.

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### 4.1. Examining Conditions of Price Review

Typically, the arbitrators' jurisdiction to decide issues arising from the price review process involves reviewing two areas. Firstly, they should examine whether the procedural conditions for a price review and price review arbitration set out in the contract have been satisfied. Secondly, the satisfaction of the substantive conditions for the revision of the price formula should be reviewed. The arbitrators' roles in each of these areas are discussed below.

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#### a. Procedural conditions

Arbitrators are often asked to decide whether the party seeking a price review has met the procedural conditions established by the GSPA. They examine the procedural conditions in four steps. The first step is checking the timing of the request for a price review. Subject to the applicable law, if the party seeking a price review has not complied with the timing requirement in the GSPA, the arbitrators are likely to dismiss the case. Examining the form of the request is the second step. Generally, preparing the request in a writing form is a requirement in sale and purchase agreements. At the third step, the arbitrators may be asked to decide about the contents of the request. Finally, the parties' obligation to negotiate before arbitration is carefully examined by arbitrators (Von Mehren & Sanders, 2014: 94).

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#### b. Substantive conditions

Arbitrators usually face specific challenges dealing with gas price review disputes. First, arbitrators are mainly confronted with technical questions such as assessing changes in a certain market or fixing a new price-review mechanism. Second, the drafting of price-review clauses only allows arbitrators to intervene when certain preconditions have been fulfilled and for a purpose which is often narrowly defined by the parties (Bohmer, 2015: 487).

As mentioned before, price review provisions provide criteria for reviewing the price called "trigger

events". In considering changes which are alleged to be the basis for a price review, arbitrators usually must determine whether and when those changes have taken place. In this regard, an analysis of changes during a comparison period is needed. The arbitrators compare the economic or market conditions when the existing price formula was established with the economic or market conditions on the review date. The typical reason for the comparison is that conditions that were affecting the value when the existing price formula was established are not new and therefore cannot be a valid reason to adjust the economics of the contract.

The language of the price review provisions in describing the requirements for revision is very general, so it may be difficult for the arbitrators to interpret and apply these provisions to the facts of a case. The use of general wording is essential to the parties' purpose in using the price review process. At the time of the GSPA negotiations, it is impossible to predict what will happen or what kind of changes will occur from time to time in the relevant gas market or markets over the term of the contract. As a result, arbitrators should interpret the meaning of the substantive conditions in the context of their commercial purpose by considering whether the changes advanced in support of a price review affect the economics of the contract in a meaningful way (Von Mehren & Sanders, 2014: 97).

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### 4.2. Arbitrators' Jurisdiction

Principally, there are two philosophical approaches to arbitrators' jurisdiction to review the price. Their jurisdiction is usually determined by the parties in price review clause of the contract. Hence, the arbitrators are supposed to review the contract's price with regard to parties' agreement in the GSPA.

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#### a. Approaches

The evolutionary approach attaches ample importance to the parties' original bargain. It recognizes that the parties should be returned to the economic balance that they had at the beginning of their relationship and provides for this to be done by amending the terms of the contract to restore the original economic balance under the newly, changed circumstances.

Unlike the evolutionary approach, the revolutionary approach attaches little significance to the parties original bargain, the original market, and the contractual balance. In other words, the contract is revised to satisfy the newly changed circumstances (Griffin & Van Eupen, 2014: 146–147). In determining the applicable approach,



the wording of the GSPA and parties' intention should be taken into account.

### **b. Arbitrators' power**

In general, the arbitrators' power in gas price review arbitrations depend on the wording of the contract. The main risk in gas price arbitrations is rewriting the price in a way that neither party has requested. In this regard, in Atlantic LNG case, the arbitral tribunal generally exercised a broad discretion to adapt the long-term supply contract to the newly changed circumstances (Bohmer, 2015: 490). In this case, the arbitral tribunal revised the contractual price by revolutionary approach. The threat that arbitrators could rewrite the price formula in an uncontrolled manner is the key complaint raised in relation to gas price review arbitrations. This fear possibly rests on a false assumption that the power of arbitrators originates from some source that is beyond the control of the parties. In fact, an arbitration clause agreed by the parties is what makes an arbitrator an arbitrator. Accordingly, the powers of an arbitrator are defined, and can be restrained, by the parties to the contract. The usual recommended strategy to mitigate the risks of unwanted results is "baseball arbitration", which essentially reduces the task of arbitrators to a binary choice between two pricing proposals submitted by the parties. It has been claimed that baseball arbitration found little, if any, acceptance in the industry. This is unsurprising. Extreme solutions are not needed to give the parties more control of the price review process. A wide variety of other measures can be adopted to limit the discretion of an arbitral tribunal hearing a price review claim. At the same time, it is essential to leave arbitrators sufficient flexibility so that overly prescriptive limits do not restrain their ability to provide a commercially sound decision that reflects a market price (Ason, 2019: 16–17).

Limitations to the decision-making process of arbitrators, limitations to structural changes to the price formula, and quantitative limitations to the revision of the contract price are considered as appropriate methods to restrict the discretion of arbitral tribunal while dealing with a price review claim (Ason, 2019: 17).

Determining an adequate margin is often central to the arbitrators' role in adjusting a price formula. Ordinarily, the issue is addressed by expert evidence. Arbitrators first examine the margin to be reflected in an adjusted contract price formula. They then consider how to change the existing formula to reflect that margin, the changes that have occurred, and any other factors set out in the parties' GSPA. In addressing this issue, arbitrators

often begin by considering the words in the GSPA to determine whether the parties of the agreement limited their authority to revise the existing price formula.

To recap, price formulae in the natural gas industry are technically and mathematically complex. Since, typically, arbitrators are not experts in the field, they may be reluctant to impose any changes greater than absolutely necessary when revising a formula. Thus, it appears more reasonable to apply an evolutionary approach to gas price reviews. Moreover, arbitrators rarely act without substantial input from the parties. The parties often provide the arbitrators with proposals for a new price formula during the proceedings, which is supported by detailed expert evidence about the economic effect of those proposals. If they do not do so, the arbitrators may require it (Von Mehren & Sanders, 2014: 100–101).

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## **5. Defining Characteristics of Gas Price Review Arbitrations**

Gas price arbitrations are characterized as one of the international commercial arbitrations with a specific nature. As a result, there are so many similarities between gas price review arbitrations and other international commercial arbitrations, including:

- Nongovernmental decision-makers: Arbitration is considered as an alternative dispute resolution (ADR) method which the parties agree to refer the dispute to a third private party. What matters is the parties' agreement in choosing the appropriate arbitrator(s).
- Confidentiality: One of the main principles governing international commercial arbitrations is the confidentiality of the procedure and resulting award. Companies prefer to keep the procedures confidential because they do not want the information on the company and its business operations or the types of disputes in which it is engaged to be disclosed to third parties, nor do they want a potentially negative outcome of a dispute to become public (Moses, 2012: 4).
- A final and binding award: Arbitration results in a final and binding award that generally cannot be appealed to a higher-level court/tribunal. Furthermore, an arbitration award is easy to enforce internationally because under the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 10 June 1958), courts are required to enforce an award unless there are serious procedural irregularities or



problems that weaken the integrity of the process (Moses, 2012: 3).

Due to the commercial weight of the dispute in gas price review arbitrations, they can also differ from other arbitrations. These differences exist chiefly because of the nature of the underlying disputes. What really counts in gas price review arbitrations is the commercial nature of the arbitration because these arbitrations do not involve any allegations of a legal wrong or a breach of a contract. Some major differences are discussed below.

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### 5.1. Gas Price Arbitration as a Dispute Prevention Method

One of the distinctive characteristics of gas price review arbitrations in the GSPA is their dispute prevention nature. In these arbitrations, what raises is a simple allegation not dispute. These arbitrators endeavor to maintain the long-term contractual relationship between the parties, while in other international commercial arbitrations, the focus of arbitrators is to resolve the dispute.

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### 5.2. Specialty

Parties of the GSPA would prefer to choose arbitrators with a particular expertise in the subject (Moses, 2012: 4). The main subject in gas price arbitrations is price review. To fulfill the appropriate review of the contractual price, the arbitrators need to be familiar with the gas industry, its related terms, and pricing issues.

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### 5.3. Different Natures of the Dispute

In contradiction to international commercial arbitrations, in gas price review arbitrations, arbitrators are usually asked to determine whether the contractually stipulated criteria for an adjustment of the contract price formula have been satisfied and, if so, what that adjustment should be. Given that by the time the parties submit their dispute to arbitration they have already (unsuccessfully) attempted to resolve these issues, the arbitrators are effectively asked to find a commercial solution that the parties failed to agree on during the mandatory negotiation period.

To fulfill this mandate, arbitrators have to perform a somewhat different role in gas price review arbitrations, when compared to the role they typically play in other arbitrations. First, they need to understand the commercial (rather than purely legal) context of the dispute. GSPAs are relational contracts and the parties are ultimately interested in maintaining their long-term

commercial relationship. The tribunal must therefore try and find a solution that is acceptable, and economically sustainable, for both parties. The tribunal must do so while, at the same time, interpreting and applying the relevant provisions of the GSPA and following the governing law of the contract.

Second, arbitrators need to understand at least the basics of gas pricing and the role they are being asked to play. Commercial arbitrators are skilled at evaluating complex factual evidence and applying that evidence to the law. That ability is less relevant in the context of gas price review arbitrations which rarely involve large amounts of factual evidence or lengthy submissions on legal issues. A failure by a tribunal to adjust its mindset to the requirements of a price review can lead (and has led) to highly unpredictable and commercially unsatisfactory awards.

Finally, as follows from the points mentioned above, arbitrators have to temper their style of decision-making in the context of a gas price review arbitration. In particular, given the need to find a commercial solution that is acceptable to both parties, in Mark Levy's experience, the best arbitrators often approach these disputes from a less legalistic, and more commercial, perspective than would normally be the case in a commercial arbitration (Levy, 2019: 210–211).

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### 5.4. Role of Experts

Experts play a vital role in gas price review arbitrations. Experts' evidence often runs into hundreds of pages, setting out, among other things, the economics of the parties' transaction, e.g. explaining the take-or-pay obligations under the GSPA; the analysis of the "trigger" criteria, e.g. whether or not there has been a change in circumstances that fulfills the contractual criteria; and the appropriate level of "adjustment" in case the tribunal finds that the criteria for triggering the price review have been satisfied. In fact, experts usually provide the majority of the evidence in a gas price review arbitration; factual witness statements are rarely submitted and, even if they are, they are often limited to short accounts of precontractual negotiations (a party may wish to explain the circumstances in which the GSPA was concluded) or pre-arbitration negotiations (a party may wish to explain how it followed, or the other party failed to follow, contractually required procedures before commencing arbitration). Furthermore, legal submissions in gas price review arbitrations largely track the expert evidence (Levy, 2019: 213).

In order to apply the gas price review effectively, the relevant expert or team of experts are preferred to be multiple experts in many elements of the GSPA. It is hence recommended that those experts should be preferably multiple experts in the TEFCEL that comprises nine elements, namely technical, technological, economic, financial, fiscal, commercial, contractual, environmental, and legal elements<sup>1</sup>. Taking into account the TEFCEL elements, the structure of expert testimony often covers mainly three or four areas:

First, economic and financial principles underlying the pricing and related arrangements: Commonly, expert testimony is used to set out the relevant economic and financial principles that underlie the pricing arrangements because it is not possible to discuss changes to those arrangements without a clear understanding of how they currently work. Explanations may cover both the pricing formula used and important nonprice terms such as the take or pay mechanism.

Second, analysis of trigger: Most price review clauses specify certain criteria (aka the “trigger criteria”) that must be satisfied in order to justify a price revision. Most often, the trigger involves changes in economic or market circumstances that meet certain criteria, e.g. affecting the value of gas in the buyer’s market.

Third, analysis of adjustment: If the tribunal finds that the criteria for triggering a review have been fulfilled, it must determine whether an adjustment to the existing pricing arrangements is justified, and, if so, what adjustment is most appropriate.

Fourth, other areas: These include providing testimony where one of the parties claims that one or more clauses of the contract are anticompetitive, or seeks to invoke a hardship clause. Some instances have been seen where parties suggest that pricing arrangements in existing long-term contracts should be in themselves an abuse of a dominant position or that the refusal to agree to a price reduction should be an abuse.

The second and third points above, i.e. the trigger and adjustment, reflect the typical structure of price review clauses (Gibson & Moselle, 2014: 118–119).

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<sup>1</sup> TEFCEL stands for technical, technological, economic, financial, fiscal, commercial, contractual, environmental, and legal elements. The TEFCEL contract management model was first proposed by Dr. N. Ebrahimi in 2005 at oil and gas summit in London, and it was then elaborated and discussed in various workshops and master-classes in Johannesburg, South Africa; Kuala Lumpur, Malaysia; Ho Chi Minh City, Vietnam; and

Given the volume of experts’ evidence, at the hearing, a majority of the time is unsurprisingly spent on experts’ testimony rather than testimony from factual witnesses or the presentation of legal submissions. By contrast, in many commercial arbitrations, relatively little time is reserved for experts’ testimony at the hearing (Levy, 2019: 213).

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## 5.5. Forward-Looking Nature of the Disputes

Generally, commercial arbitration is a backward-looking process that hinges on the tribunal (court) awarding damages to the claimant for a breach that occurred in the past. Gas price review arbitrations, on the other hand, require the tribunal to exercise both backward-looking and forward-looking judgment. The express objective in a price review is to fix the contract price formula as of a specified “review date”. To this end, the tribunal has to first determine whether a triggering event occurred at or before the defined review date. Therefore, strictly speaking, changes that post-date the review date are not relevant; indeed, those changes are for the next price review, and taking them into account in an earlier price review risks double-counting them in both the current price review and the next. Considering that, when deciding whether a triggering event has occurred, tribunals are expected to exercise backward-looking judgement only.

Next, if the trigger is established, the tribunal is obliged to adjust the contract price formula in accordance with specified criteria. While these criteria differ from contract to contract, broadly, either a price review clause would try to relate the price revision to the change that triggered the review or it would not. In the former case, the task of the tribunal is to determine the value of the change, while in the latter it is supposed to determine the value of the gas. In both cases, the adjustment has to be made by reference to the review date, that is, the revised contract price should reflect the value of the change or the value of the gas as of the review date.

However, it is possible that the energy prices will rise between the review date and the hearing date, which gives rise to the perception that a higher contract price is

Dubai, UAE. The attendees of those workshops and master-classes were the various experts from both **IOCs and NOCs**. This model not only works for professional negotiation, contract conclusion, contract management, and contract execution in the oil and gas sector, but also bring values for the prevention of disputes as well as disputes resolution.





justified or vice versa. It can be difficult for a tribunal to avoid those perceptions, especially where the triggering events that occurred during the price review period suggest the opposite. The tribunal is also likely to be guided by its mandate to find a solution that is commercially acceptable to both parties; it may be reluctant to set a price that completely ignores changes in market prices post-dating the review date; indeed, although it has the mandate or even the jurisdiction to take these factors into account, it can be called into question. More complications can arise if the clause needs, for example, the value of gas to be expected to have an enduring effect, which requires some prescience in the part of the tribunal (Levy, 2019: 215-216).

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## 6. Interaction Between Gas Price Arbitrations and Experts

Generally, experts have three significant roles in international oil and gas disputes. First, parties engage the experts as a valuer or assessor to provide certainty to particular contractual issues. Second, expert as witness; another area of international commercial dispute resolution in which the service of an expert may be used is as an expert witness in international arbitrations. The expert may be party-appointed or tribunal-appointed. Third, expert as a dispute resolver; the expert as a dispute resolver is a newer role of the experts. As a dispute resolver, the experts have been appointed by agreement of the parties to advise or assist with resolving a dispute arising in a contract without recourse to litigation or arbitration. The instance in which the parties have agreed that the experts' decision is final and binding upon the parties is called expert determination (Stultz-Karim and Fraser, 2009: 3-4).

Experts' role in gas price arbitrations is of crucial importance. In these arbitrations, the tribunal mostly use party-appointed experts, but in some cases, it chooses the experts itself. Sometimes in gas sale and purchase agreements, the dispute is referred to expert determination. Hence, the nature of the party-appointed expert, the tribunal-appointed expert, and expert determination demands further examination.

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### 6.1. Examining Concept and Nature of Different Types of Experts in Gas Price Arbitrations

In cases that arbitrators are allowed to use expert testimony, experts are employed in two different ways: expert witness or expert inquiry. The experts can also be appointed by the tribunal or the parties. In both cases

what matters is the expert's independency. They should deliver their reports and be present in oral hearing sessions for inquiry. Additionally, when the parties refer the dispute to expert determination, they have decided to settle their dispute by an independent body which is one of the alternative dispute resolutions.

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#### a. Concept and nature of expert witness

The party-appointed experts are called expert witnesses. They assist the tribunal with technical and specific issues. The expert witness's role in international arbitrations is related to evidence and should be carefully examined under the heading of evidence. All of the general rules related to evidence are chiefly applicable to expert witness (Sandifer, 1975: 327).

According to practical custom in international arbitration, the expert's testimony is delivered to arbitral tribunal as a testimony in a written form with an assumption that expert will be ready to present when needed for cross-examination or answering arbitrators' questions (Pietrowsky, 2006: 395).

There are a variety of technical and specific issues in the disputes of oil and gas industry that are referred to arbitration. Due to the extent of the topics, using more than one expert witness is inevitable in some cases. One of the benefits of using a group of expert witness is that the arbitral tribunal will be aware of different experts' opinions. Furthermore, the experts present their opinions more cautiously, considering the fact that their opinions might be challenged by other experts.

The most significant advantage of using expert witness is related to the delegation of judicial authority (Dwyer, 2008: 307). The arbitrators are always in danger of delegating their authority in matter of facts or matter of laws to third party. As stated before, expert witnesses merely assist the tribunal to make appropriate decision, so using them reduces the danger of the delegation of judicial authority due to the fact that the arbitral tribunal is the final decision maker. However, tribunal-appointed experts increase the risk of the delegation of judicial authority.

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#### b. Concept and nature of expert inquiry

Expert inquiry can assist the arbitral tribunal with resolving the technical and specific issues. Using expert inquiries by tribunals has been recognized in rules governing the arbitration. For instance, Paragraph 1 of Article 26 of UNCITRAL model law on international arbitration says:

Unless otherwise agreed by the parties, the arbitral tribunal may appoint one or more experts to report to it on specific issues to be determined by the arbitral tribunal.

Expert inquiry is also mentioned in Article 25 of Iran's International Commercial Arbitration Law:

The arbitrator may refer the subject to experts when needed and may prescribe that either parties should deliver related information to the experts and provide experts' access to the related documents, goods, or other properties to be reviewed, unless otherwise agreed by the parties. If one of the parties requests or the arbitrator discerns that it is needed, not only shall the experts deliver the written report, but also they shall be present at hearing session to answer the questions. The parties may also invite their expert(s) to give testimony.

Employing the tribunal-appointed expert(s) has some risks. Firstly, in some cases, a tribunal may so heavily rely on the expert evidence in the determination of the contract price that a tribunal-appointed expert may become the de facto decision maker in the dispute. This, in turn, will be reflected in the costs of arbitration. In order to obtain a decision on price adjustment, the parties will need to pay the fees of the arbitrators, the decision-makers, and the experts, being de facto decision makers, who formally only assist the tribunal (Ason, 2019: 18).

Secondly, using the tribunal-appointed expert(s) may increase the risk of the delegation of judicial authority as mentioned above. If the arbitral tribunal merely uses the expert inquiry, it may delegate its authority intentionally or unintentionally to the experts. In other words, the tribunal-appointed expert would perform a quasi-arbitral role, examining the facts and documents, hearing the parties (normally through the party-appointed expert, often with the presence or contribution of legal counsel as well), and eventually issuing the expert's opinion. On such opinion, the tribunal will, in most cases, base its own award on the aspects submitted to and covered by the tribunal-appointed expert's report (De Berti, 2017: 62).

Thirdly, the risk of the tribunal-appointed expert(s) in gas price arbitrations is relatively high. Although the tribunal will usually have the power to appoint an expert itself, as in other forms of arbitration, tribunal-appointed experts are relatively rare. This is because the parties will normally need to rely on the assistance of an expert in preparing their submissions because of the need for economic and market analysis and opinion.

Consequently, a tribunal-appointed expert is likely to cause the time and cost involved in resolving the dispute to increase because there will be three experts (one tribunal-appointed expert and two party-appointed experts) rather than just two (Sparling, Magnin, Morton, Gilbert & Farren, 2016: 12).

### **c. Concept and nature of expert determination**

Expert determination is in the category of alternative dispute resolution methods. In gas price arbitrations, the parties may refer the dispute to expert determination in the price review clause. Expert determination is different from expert witness. While expert witness is a mean that helps the arbitral tribunal to make decision, expert determination is an independent method for contractual dispute resolution. Expert determination is defined as referring the dispute to an impartial third party to be resolved by his/her personal expertise (Lew, Mistelis, & Kröll, 2003: 10).

Expert determination and its governing rules have been recognized in ad hoc and constitutional rules. ICC's International Center for Expertise that was established in 1976, defines the rules for expertise. Paragraph 2 of Article 7 of the ICC's Expertise Rule provides that:

Prior to the appointment of an expert, the Center shall consider in particular the prospective expert's qualifications relevant to the circumstances of the case; the expert's availability; place of residence and relevant language skills; and any observations, comments, or requests made by the parties. In appointing the expert, the Center shall apply any agreement of the parties related to the appointment.

The independency of the expert is also mentioned in Paragraph 3 of Article 7 of ICC's Expertise Rule. Paragraph 4 of Article 7 states that:

Before an appointment, a prospective expert shall sign a statement of independence and disclose in writing to the Center any facts or circumstances which might be of such a nature as to call into question the expert's independence in the eyes of the parties. The Center shall provide such information to the parties in writing and fix a time limit for any comments from them.

According to Paragraph 3 of Article 12:

Unless otherwise agreed by all of the parties, the findings of the expert shall not be binding upon the parties.



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## 6.2. Role of Expert in Gas Price Review Arbitrations

The role of the expert in gas price review arbitrations can be different from that in other international arbitration proceedings. The role of the expert can be central in price reviews. The majority of the testimony is often provided by expert witness, whether measured in terms of the volume of written matter, the time spent in oral testimony or the focus of legal submissions. Factual evidence, if any, may be limited to short accounts of the negotiations that preceded the request for arbitration. To put this in perspective, there are often no more than 10 or 20 pages of factual testimony but several hundred pages of expert testimony, and legal pleadings often largely focus on the content of the expert reports (Gibson & Moselle, 2014: 118).

Especially at the price adjustment stage, the tribunal is likely to seek the assistance of a tribunal-appointed expert. If the tribunal informs the parties that it requires such assistance, this request will likely trigger the following process: first, the tribunal will invite the parties to comment on the general principle and specific conditions of appointment of an expert. After the exchange of written submission on these issues, and in the absence of objections to the appointment of an expert, the tribunal will suggest that the parties may agree on a list of three potential candidates. The tribunal will either receive this list or, if not provided, embark on its own search for a suitable candidate. The tribunal will then interview the candidates and inform the parties about the selection, offering them an opportunity to comment on the appointment. If there are no objections, the tribunal will appoint the expert and define his or her mandate. The tribunal will then meet with the expert, and the expert will prepare and submit a report. Having received the report, the parties will call the expert for cross-examination. For that purpose, the parties, the expert, and the tribunal, will typically meet for an expert hearing. After the hearing, and the exchange of post-hearing submissions, the tribunal will communicate its decision as to the revised price formula (Ason, 2019: 17-18).

Using tribunal-appointed expert in gas price arbitrations is not common due to the risks mentioned before. The most important risk is that a tribunal-appointed expert may become the de facto decision

maker in the dispute. The more common approach is for each party to appoint its own expert. If this is the approach that is to be adopted, it will be beneficial for an appropriate expert team to be identified at an early stage in the price review dispute. For a party requesting a review, that may well be before the price review notice is served. The benefit of doing this is that the expert's opinions can be factored into the party's position and submissions from the very start, and the message can be consistent throughout the process. However, the distinction between the expert's opinions being taken into account in negotiations or otherwise, and the expert maintaining independence, must be observed to avoid the expert's ability to testify as an independent expert in the arbitration being undermined. Witness conferencing (or "hot tubbing", as it is sometimes known) is sometimes used to give the tribunal the opportunity to put questions to the experts instructed by both parties at the same time. Precisely how this is arranged will vary from case to case, but often it will follow the cross-examination of the experts by the parties' advocates. This can be extremely effective in allowing the areas of difference between the experts to be explored by the tribunal (Sparling, Magnin, Morton, Gilbert & Farren, 2016: 13).

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## 7. Iran-Turkey Gas Dispute

Iran oil and gas industry designates various petroleum investment contracts models for its upstream petroleum projects including buy-back contracts with three generations and IPC<sup>1</sup> which is the newly developed model contract. In all these contracts, there attached Long Term Crude Oil Sales Agreement and Long-Term Gas Sale & Purchase Agreements for the recovery of payments and the payments of remuneration fee based on the rate of return (ROR)<sup>2</sup> calculation. In these long-term sales agreements, the price formulae provisions will be mutually discussed and agreed by the Parties in the Contract. In 1996, National Iranian Gas Company (NIGC) entered into a long term gas sale agreement with the state-owned oil company BOTAS petroleum pipeline corporation for 25 years

(<https://financialtribune.com/articles/energy-economy/66369/iran-clears-40-of-gas-fine-to-turkey>). According to this agreement, Iran was obliged to deliver to Turkey 10 billion cubic meters per year. The content of this contract is not published due to security reasons

Risk Service Contracts with R-Factor Mechanism. *OGEL*, 1-12.

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<sup>1</sup> Iran Petroleum Contracts

<sup>2</sup> See for general reference: Ebrahimi, S. N. & Maddahinasab M. (2017). Controlling Contractor's Rate of Return (ROR) in

and confidentiality provisions of the contract, but in the light of an interview with Iranian oil industry experts, it is known that the content of price review provision in Iran-Turkey contract is similar to the one in Atlantic LNG Company of Trinidad and Tobago and Gas Natural LNG SPA. The price review clause in Iran-Turkey gas agreement implicitly provides that:

“If at any time either Party considers that economic circumstances beyond the control of the Parties have substantially changed as compared to what it reasonably expected when entering into this contract, and the Contract Price does not reflect the value of Natural Gas in the Buyer's end user market, then such Party may, by notifying the other Party in writing and giving with such notice information supporting its belief, request that the Parties should forthwith enter into negotiations to determine whether or not such changed circumstances exist and justify a revision of the Contract Price provisions.”

When a price dispute occurred between two Countries, Turkey firstly issued price review notice and sought for negotiation. Due to failure of the negotiations with the NIGC, Turkey referred the issue to institutional arbitration of International Court of

Arbitration. Aftermath, Turkey opened two separate cases against NIGC of Iran in 2012. One of the cases in disputes was on the higher gas price and the other was on the deficiencies in the gas distribution. In the second case, the Court ruled out in favor of Iran. In the second case of disputes, the Court decided against NIGO of Iran.

In the case of dispute on higher gas prices, Turkey lodged an arbitration case with the International Chamber of Commerce dated January 16, 2012. The BOTAS of Tukey argued that the prices at which the gas was brought from Iran were above international prices and had to be reduced by 35.5 percent. NIGC of Iran rejected that claim. The Court agreed to a reduction of 13.3 percent on gas purchased from Iran between 2011 and 2015 (<https://financialtribune.com/articles/energy-economy/66369/iran-clears-40-ofgas-fine-to-turkey>).

In the other case in disputes related to the deficiencies in gas distribution, the Court rejected the BOTAS claim concerning deficiencies in gas distribution on November 10, 2014.

"In its first decision on Iran-Turkey gas dispute, ICA ruled against Turkey's complaint that Iran is not able to provide the Eurasian country with sufficient gas. Turkey had claimed that Iran reduced the volume of gas exports to Turkey by 25% without mutual consent. Interestingly,

Iran was acquitted of all charges, save the \$20 billion compensation" Araqi said (<https://financialtribune.com/articles/energy/35610/verdict-on-iranturkey-gas-dispute-announced>).

It should be noted that in the 1996 Gas Salem Agreement between Iran and Turkey, a “Take or Pay” condition is included under which, even if the Turkish company fails in getting ten billion cubic meter of gas per annum, it must pay the amount fixed by the Agreement. For example, in 2009, BOTAS had to pay a compensation of \$600 million due to the fact that instead of 10 billion cubic meters, it could only import 6.8 billion cubic meters.

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## Conclusion and remarks

The specific nature of the gas price review arbitrations, make them different from other ordinary international arbitrations. The role of experts, continuation of long-term and strategic relationship of the parties, maintenance of contractual stability, prevention and management of disputes instead of dispute resolution, win-win principle and specialty of the subject matter of dispute are major specific characteristics of this kind of arbitrations.

As above mentioned, one of the unique features of gas price review arbitrations is the role of experts. Experts can be used in two distinct ways. Due to risks of tribunal-appointed experts, the arbitral tribunal often use party-appointed experts in reviewing contractual price. Sometimes in price review provisions, the parties refer the dispute to expert determination. In this case, they decide to refer the dispute to an independent body called ‘expert determination’ as an ADR. In other words, they withdrew their disputes to be resolved by arbitration. Clearly, there are so many differences between arbitration and expert determination such as the difference between arbitration clause and expert determination clause and applicability of the concerned decisions. Expert determination is applicable as an agreement, while arbitration award is effective in accordance with the provisions of the New York Convention.

Eventually, calling this type of dispute resolution method ‘arbitration’ is not idiomatic. So, the nature of the gas price review provision is not expert determination, but arbitration. Supporting that, some reasons will be set out. First, the arbitration clause is different with expert determination clause. The parties of a GSPA can readily refer the price adjustment in the price review clause of their contract to arbitration or expert





determination. Second, When the issue is referred to arbitration, the arbitral tribunal is the final decision-maker and the experts only assist the tribunal with the award. To recap, the significant role of the experts in price review arbitrations does not change the nature of these arbitrations to expert determination.

## References

- Ason, A. (2019). Price Reviews and Arbitrations in Asian LNG Markets. Oxford Institute for Energy Studies, No. 286084.
- Atlantic LNG Company of Trinidad and Tobago and Gas Natural LNG SPA, 1995, "Natural Gas Price Reviews: Past, Present and Future", *Journal of Energy & Natural Resources Law*. Vol 30 No 1.
- Baily, J & Lidgate, R. (2014). LNG Price Reviews: A Sign of the Times. *Journal of World Energy Law and Business*, Vol. 7, No. 2.
- Bohmer, Lisa. M. (2015). Arbitrating International LNG Disputes: Lessons Learned Over Two Decades. *Journal of World Energy Law and Business*, Vol. 8, No. 5.
- De Berti, G. (2017). Experts and Expert Witnesses in International Arbitration: Adviser, Advocate or Adjudicator? [https://www.dejalex.com/wp-content/uploads/2017/12/publ\\_11\\_AYIA.pdf](https://www.dejalex.com/wp-content/uploads/2017/12/publ_11_AYIA.pdf).
- Dwyer, D. (2008). *Judicial Assessment of Expert Evidence*. New York: Cambridge University Press.
- Ebrahimi, S. N. & Maddahinasab M. (2017). Controlling Contractor's Rate of Return (ROR) in Risk Service Contracts with R-Factor Mechanism. *OGEL*, 1-12.
- Final Award in Case 13504, January 2007, in: "Extracts from ICC Arbitral Awards: Price Setting and Price Revision in the Energy Sector", in *ICC International Court of Arbitration Bulletin*, Vol 20/2, 2009, in *The Trigger Phase*, in *Gas Price Arbitrations: Globe Law and Business*, 2014.
- Gas Natural Aproveisionamientos SDG SA v Atlantic LNG Company of Trinidad and Tobago, 2008, US Dist. Lexis 69632 (SDNY), In *The Arbitrator's Role*, in *Gas Price Arbitrations: Globe Law and Business*, 2014.
- Gibson, C., & Moselle, B. (2014). The Role of the Expert in Price Review Arbitrations. *Gas Price Arbitrations: A Practical Handbook*, *Globe Law and Business*, 117-129.
- Griffin, P., & Van Eupen, F. (2014), *The Future for Price Reviews*. *Gas Price Arbitrations: A Practical Handbook*, *Globe Law and Business*, 141-157.
- Holland, B., & Ashley, P. (2012). Natural Gas Price Reviews: Past, Present and Future. *Journal of Energy & Natural Resources Law*, Vol. 30, No 1, 29-44.
- <https://financialtribune.com/articles/energy/35610/verdict-on-iran-turkey-gas-dispute-announced>, *Verdict on Iran-Turkey Gas Dispute Announced*
- <https://financialtribune.com/articles/energy-economy/66369/iran-clears-40-of-gas-fine-to-turkey>, *Iran Clears 40% of Gas Fine to Turkey*.
- ICC's Expertise Rule, in Force as from 1 January 2003.
- Leijten, M., & De Vries Lentsch, M. (2014). The Trigger Phase. *Gas Price Arbitrations: A Practical Handbook*, *Globe Law and Business*, 33-47.
- Levy, M. (2014). Drafting an Effective Price Review. *Gas Price Arbitrations: A Practical Handbook*, *Globe Law and Business*, 9-21.
- Levy, M. (2019). Gas Price Review Arbitrations: Certain Distinctive Characteristics. *The Guide to Energy Arbitrations*, *Law Business Research Ltd*.
- Lew, J. D., Mistelis, L. A., & Kröll, S. (2003). *Comparative International Commercial Arbitration*. *Kluwer Law International*.
- McNAIR CHAMBERS. (2013). LNG Price Review Disputes. [https://www.mcnairchambers.com/client/publications/2013/LNG\\_PRICE\\_REVIEW\\_DISPUTES.pdf](https://www.mcnairchambers.com/client/publications/2013/LNG_PRICE_REVIEW_DISPUTES.pdf).
- Moses, M. (2012), *The principles and Practice of International Commercial Arbitration*. Second Edition, *Cambridge University Press*.
- Pietrowski, R. (2006). Evidence in International Arbitration. *Arbitration International*, Vol. 22 No. 3, 373-410.
- Sandifer, D. V. (1975). *Evidence Before International Tribunals*. Virginia: University of Virginia Press.
- Sparling, S., Magnin, J., Morton, P., Gilbert, J., & Farren, A. (2016). *Taming Price Review Clauses: Lessons from the Transactional and Arbitration Battlefields*. LNG 18 Perth Australia.
- Stultz-Karim, S.P., & Fraser, H (2009). Expert Determination in International oil & Gas Disputes: The Impact of Lack of Harmonization in Reserves

Classifications Systems and Uncertainty in Reserve Estimates. Society of Petroleum Engineers.

UNCITRAL Model Law on International Commercial Arbitration, 1985 with Amendments as Adopted in 2006.

Von Mehren, G. (2014). The Arbitrator`s Role. Gas Price Arbitrations: A Practical Handbook, Globe Law and Business, 91-103.