

Global Arbitration Review

The Guide to Construction Arbitration

Editors

Stavros Brekoulakis and David Brynmor Thomas QC

Fourth Edition

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Publisher's Note

Global Arbitration Review is delighted to publish *The Guide to Construction Arbitration*.

For those unfamiliar with GAR, we are the online home for international arbitration specialists, telling them all they need to know about everything that matters. Most know us for our daily news and analysis service. But we also provide more in-depth content: books and reviews; conferences; and handy workflow tools, to name just a few. Visit us at www.globalarbitrationreview.com to find out more.

Being at the centre of the international arbitration community, we regularly become aware of fertile ground for new books. We are therefore delighted to be publishing the fourth edition of this guide on construction arbitration.

We are delighted to have worked with so many leading firms and individuals to produce *The Guide to Construction Arbitration*. If you find it useful, you may also like the other books in the GAR Guides series. They cover energy, mining, challenging and enforcing awards and M&A, in the same practical way. We also have books in the series on advocacy in international arbitration and the assessment of damages, and a citation manual (*Universal Citation in International Arbitration*). My thanks to the editors, Stavros Brekoulakis and David Brynmor Thomas QC, for their vision and energy in pursuing this project and to my colleagues in production for achieving such a polished work.

David Samuels

Publisher, GAR

September 2021

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Introduction

Stavros Brekoulakis and David Brynmor Thomas QC¹

After two years of hiatus, we are delighted to introduce the fourth edition of *The Guide to Construction Arbitration*. And what a two-year break it has been! For the past 20 months, we have witnessed an unprecedented public health emergency that has significantly disrupted construction contracts and projects and has given rise to a significant number of construction arbitrations worldwide. There are two types of covid-19-related disputes that the pandemic has brought about. First, disputes concerning delay and disruption that has occurred at all developing stages of construction projects, including procurement, engineering, supply and building. Many construction sites had to suspend their works in the course of 2020. Now that construction work has started to resume, projects experience significant slowdown in supply chains for materials due to border closures, steep rises in freight rates and costs of materials, including, for example, steel prices, which have more than doubled in the past 12 months in Europe and the United States,² and labour shortages due to illness, self-isolation and travel restrictions. Contractors, subcontractors and suppliers have to abide by new health protocols that involve severe restrictions in the number of workers that can be on site at a certain time. These restrictions have affected the level of productivity and the ability of contractors to mobilise manpower, and have caused significant disruption and delays.

Second, disputes arising out of concession contracts concerning the operation of infrastructure projects. Because the pandemic has disrupted people's ability to travel and commute both internationally and domestically, operators and developers of infrastructure projects such as airports and highways have seen a dramatic decline in their earnings,

1 Stavros Brekoulakis is a professor and the director of the School of International Arbitration at Queen Mary University of London and an associate member of 3 Verulam Buildings. David Brynmor Thomas QC is a barrister at 39 Essex Chambers and visiting professor at Queen Mary University of London.

2 Turner & Townsend, 2021 International Construction Market Survey, p. 9.

which has left them exposed to financing and operational debts. As a result, they are now filing arbitration claims against states that have taken measures restricting travel to protect public health.

Against this background, the Guide aims to offer helpful insight in the field of international construction contracts and dispute resolution. A question that often arises is why international construction disputes are different from other types of commercial disputes and why do they require specialist arbitration knowledge? In the first place, construction projects are associated with a wide range of risks, including unexpected ground and climate conditions, industrial accidents, fluctuation in the price of materials and in the value of currency, political risks such as political riots, governmental interventions and strikes, legal risks such as amendments in law or failure to secure legal permits and licences, and – as we have all recently learned – global pandemics.

Further, time is typically critical in construction projects. A World Cup football stadium must be delivered well in advance of the commencement of the competition. Similarly, the late delivery of a power station can disrupt the project financing used to fund it.

In the second place, delay and disruption claims in construction arbitrations tend to be complex. Many phases of a construction project, such as engineering and procurement, can run concurrently, which often makes it difficult to identify the origins and causes of delay. Legal concepts such as concurrent delay, critical path and global claims are unique features in construction disputes.

Equally, the involvement of a wide number of parties with different capacities and divergent interests adds to the complexity of construction disputes. A typical construction project may involve not only an employer and a contractor, but also several subcontractors, a project manager, an engineer and architect, specialist professionals such as civil or structural engineers and designers, mechanical engineers, consultants such as acoustic and energy consultants, lenders and other funders, insurers and suppliers. A seemingly limited dispute arising from one subcontract may give rise to disputes under the main construction contract and the other subcontracts, as well as disputes under much wider documentation such as shareholder agreements, joint operating agreements, funding documents and concessions. Disputes involving several parties may give rise to third-party arbitration claims and multiparty arbitration proceedings.

Another important feature of construction disputes is the widespread use of standard forms, such as the FIDIC or the ICE conditions of construction contracts. Efficient dispute resolution requires familiarity and understanding of the, often nuanced, risk allocation arrangements in these standard forms. Good knowledge of construction-specific legislation is necessary too. While the resolution of most construction disputes usually turns to the factual circumstances and the provisions of the construction contract, legal issues may also arise in relation to statutory (frequently mandatory) warranty and limitation periods for construction claims, statutory direct claims by subcontractors against the employers,³

³ For example, in France, Law No. 75-1334 of 31 December 1975 on Subcontracting.

statutory prohibition of the pay-when-paid and pay-if-paid provisions⁴ and legislation on public procurement.⁵

Finally, construction disputes are procedurally complex, requiring efficient management of challenging evidentiary processes, including document management, expert evidence, programme analysis and quantification of damages. The evidentiary challenges in construction arbitrations have given rise to the use of tools such as Scott Schedules (used to present fact-intensive disputes in a more user-friendly format), that are unique in construction arbitrations.⁶

It is for all these reasons that alternative dispute resolution and arbitration of construction disputes require special focus and attention, which is what *The Guide to Construction Arbitration* aims to provide.

The Guide to Construction Arbitration is designed to appeal to different audiences. The authors of the various chapters are themselves market-leading experts so that the Guide can provide a ready reference to specialist construction arbitration practitioners. At the same time, the Guide has been compiled and written to offer practical information to practitioners who are not specialists in international construction contracts and dispute resolution. For example, the Guide will be a practical textbook for in-house lawyers who may have experience in negotiating and drafting construction contracts but are not familiar with the special claims and remedies that exist under standard forms of construction contracts. Equally, construction professionals who may have experience in managing construction projects but lack experience in the conduct of construction arbitration will find the Guide useful. Last but not least, students who study construction arbitration will find it to be a helpful source of information.

While the main focus of the Guide is the resolution, by arbitration, of disputes arising out of construction projects, it also contains chapters that address important substantive aspects of international construction contracts. To understand how construction disputes are resolved in international arbitration, one has to understand how disputes arise out of a typical construction contract in the first place, and what are the substantive rights, obligations and remedies of the parties to a construction contract.

Thus, this book is broadly divided into four parts. Part I examines a wide range of substantive issues in construction contracts, such as the foundation of construction projects, the FIDIC suite of contracts, allocation of risk in construction contracts, contractors' claims, remedies and reliefs, employers' claims, remedies and reliefs, and examination of the critical topic of concurrent delay.

Part II then focuses on the processes for the resolution of construction disputes and addresses topics such as the claims resolution procedures in construction contracts, methods of dispute resolution in construction contracts, dispute boards, alternative dispute resolution in construction and infrastructure contracts, the suitability of various arbitration rules for construction disputes, arbitration clauses in construction contracts, subcontracts and

4 For example, in the United Kingdom, with the UK Housing Grants Construction and Regeneration Act 1996.

5 For example, EU Directive 2014/24.

6 J Jenkins and K Rosenberg, 'Engineering and Construction Arbitration', in Lew, et al. (eds), *Arbitration in England*, Kluwer (2013).

multiparty arbitration in construction disputes, interim relief and emergency arbitrators in construction arbitration, organisation of the proceedings in construction arbitrations, the management of documents and experts in construction disputes, and awards issued in construction arbitrations.

Part III examines a number of select topics in international construction arbitration by reference to some key industry sectors and contract structures, including the field of investment arbitration, the energy sector, the mining sector, offshore construction disputes and concession contracts and turnkey projects. Part IV examines construction arbitration in specific jurisdictions of particular interest and with very active construction industries.

Overall, the fourth edition builds upon the outstanding success of the first three editions, which have made *The Guide to Construction Arbitration* one of the most popular guides in the GAR series. The structure and organisation of *The Guide to Construction Arbitration* is broadly based on the LLM course on international construction contracts and arbitration that we teach at Queen Mary University of London. The course was first introduced by HH Humphrey Lloyd in 1987 and was taught by him for more than 20 years. Humphrey has been an exceptional source of inspiration for hundreds of students who followed his classes, and we are personally indebted to him for having conceived the course originally and for his generous assistance when he passed the course on some years ago.

We want to thank all the authors for contributing to *The Guide to Construction Arbitration*. We are extremely fortunate that a group of distinguished practitioners and construction arbitration specialists from a wide range of jurisdictions have agreed to participate in this project. We further want to thank Bevan Woodhouse and Hannah Higgins for all their hard work in the commission, editing and production of this book. They have made our work easy. Special thanks are due to David Samuels and GAR for asking us to conceive, design and edit this book. We thoroughly enjoyed the task, and hope that the readers will find the result to be useful and informative.

Part III

Select Topics on Construction Arbitration

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Construction Arbitration and Turnkey Projects

James Doe, David Nitek and Noe Minamikata¹

Introduction

A 'turnkey' project is so called because (in theory at least), the employer, after taking over the project, has only to 'turn the key' to activate the plant or other project that has been constructed. It is a frequently used model of procurement for power stations, processing plants and where the works are funded by way of project financing. The contractor takes the vast majority of responsibility in terms of design, engineering, procurement and construction. The owner specifies the output or performance that it requires of the facility or plant but rarely provides detailed specifications. It is for the contractor to determine how it intends to achieve the required output or performance. The contract price is almost always lump sum and there is a fixed completion date that can only be adjusted in a limited number of circumstances (e.g., acts of prevention by the owner).

The performance of the plant will be assessed against a range of detailed criteria specified in the contract documentation (normally in a lengthy schedule). In practice, completion will only be achieved after extensive rounds of taking over and performance tests. As well as claims concerning delay and cost overruns, which are a common feature of construction disputes in general, arbitrations concerning turnkey projects frequently involve issues concerning fitness for purpose, non-compliance with owner requirements, disputed variations to the specification and the justification for and consequences of termination of the contract.

While contractors are likely to price higher for taking on the increased risk as compared to more traditional forms of procurement, extreme competition in some international markets (most notably but not exclusively the Middle East) has led contractors to bid lower

¹ James Doe and David Nitek are partners, and Noe Minamikata is a professional support lawyer, at Herbert Smith Freehills LLP.

prices, which can in turn lead to more claims resulting in disputes. The size and complexity of turnkey projects often means these disputes (and the arbitrations required to resolve them) are also large and complex.

Standard forms

While some turnkey projects are procured on bespoke forms of contract, frequently parties will use a modified version of a standard form. A form commonly encountered is the International Federation of Consulting Engineers (FIDIC) Silver Book, which reached its second edition in 2017.² Consistent with the philosophy of turnkey procurement, the terms of this standard form place a heavy burden on the contractor in terms of design responsibility and risk. Fitness for purpose is a contractual requirement. The intended effect is to achieve, so far as possible, certainty of final price and completion date. However, there are exceptions to the extent of risks that the contractor takes on and these often form the basis of disputes that can lead to arbitration. These are discussed below.

Other forms of turnkey contracts include the Japanese Engineering Advancement Association Contract, the International Chamber of Commerce (ICC) Model Turnkey Contract, the US American Institute of Architects Contract, the UK I.ChemE International Contract Suite (although this needs some adaptation to make it properly 'turnkey') and the Belgian Orgalime Turnkey Contract. While the terms of these contracts vary in some respects, the FIDIC Silver Book is discussed below on the basis that it is a typical example of a turnkey contract standard form that is commonly used as a basis for contracting on international turnkey projects.

The contractor's key obligations, as set out in the 2017 Silver Book, are as follows:

- when completed, the works are to be fit for the intended purposes defined in the Employer's Requirements;
- the works are to include any work that is necessary to satisfy the Employer's Requirements, or is implied by the contract and all works that (although not mentioned in the contract) are necessary for stability or for the completion, or safe and proper operation, of the works;
- the contractor is deemed to have scrutinised the Employer's Requirements and is responsible for the design of the works and for the accuracy of the Employer's Requirements;
- the employer is not responsible for any error, inaccuracy or omission of any kind in the Employer's Requirements and any data or information received by the contractor, from the employer or otherwise, does not relieve the contractor from its responsibility for the design and execution of the works; and
- there are limited exceptions to the above where the employer is responsible for the correctness of certain portions of the Employer's Requirements and data and information provided by it. These are portions, data and information stated in the contract as being

2 Notwithstanding the release of the second edition, the first edition of the FIDIC Silver Book, which was released in 1999, continues to be used widely on turnkey projects. This chapter therefore considers the position under both editions. Although many of the principles and procedures of the 1999 Silver Book have been adopted in the 2017 Silver Book, material changes have been introduced to the latter. To the extent that any deviations between the two editions are relevant to the topics covered in this chapter, these have been highlighted as appropriate.

immutable or the responsibility of the employer; definitions of intended purposes of the works or any parts thereof; criteria for the testing and performance of the completed works; and portions, data and information that cannot be verified by the contractor, except as otherwise stated in the contract.

The parties may agree to mitigate the above terms by, for example, providing for the contractor only to assume risk following a specified period for inspection or adopting existing ground condition reports as a benchmark to apportion risks between the employer and contractor. The precise scope and application of these exceptions can be areas of dispute between the parties.

Additional cost and extensions of time

The above does not mean that the final contract sum will not vary from that specified at the time the contract was executed. The contract sum will usually be fixed price. However, an employer will usually have the right to issue variation instructions, although it must recognise that substantial extra costs may be incurred, both as to the cost of the variation works themselves and disruption to the contractor's regular progress. The undesirable phenomenon known as 'scope creep' may also arise where the scope of a project is not properly defined at the outset and unplanned variations become necessary, notwithstanding the initial definition of what is required in the Employer's Requirements. Such a process will inevitably lead to substantial increased cost, which in turn can lead to disputes over whether these costs should be borne by the contractor or the employer.

Often these disputes can be characterised as the difference between design development (which is usually at the contractor's risk) and variations (for which the employer is usually responsible).

Another form of increased cost that may not be fully budgeted for will be the interface with other works being carried out by or on behalf of the employer on other sites (or even the same site). The turnkey contract may be part of a wider project for which work is being carried out under other contracts at several different sites adjoining each other. Site and workspace boundaries may not be well defined and there may be works being carried out for the employer that are unconnected (or not directly connected) with those within the turnkey contract, but that affect its regular progress, again causing more expense.

Yet another basis for claiming additional cost may be the employer's failure to comply with the requirements in the contract for it to give possession of the site or to supply feedstock or other materials or components. If these are not provided at the times specified in the contract, then the contractor may have further scope to claim for increased cost.

In all the above cases, a contractor may also claim for extra time so as to extend the completion date and reduce its liability for liquidated damages for delay. As with other forms of construction contract, determining responsibility for delay in the context of turnkey projects can be factually and technically complex, giving rise to significant disputes. This is particularly the case where there are arguably two or more competing causes of delay, some of which are at the contractor's risk, and some of which are at the employer's risk (i.e., concurrent delay). However, parties often expressly set out how to deal with concurrent delay; for example, by providing that the contractor is not entitled to an extension of time in such circumstances, or is entitled to an extension of time but not cost. In this

regard, the 2017 FIDIC Silver Book states that the Special Provisions may set out rules and procedures for dealing with concurrent delay, if the parties so agree. That said, true concurrent delay is relatively rare in practice.

Testing and completion

Turnkey contracts typically impose a complex regime for takeover and performance testing. Before the plant can be taken over by the employer, tests will have to be carried out to demonstrate its compliance with the contract documentation and this may itself be a lengthy process. Following takeover, performance tests may also be required in order to observe the performance of the plant in action. The contractor's compliance with the output specification will be assessed and any failure will give rise to retesting.

If it emerges that the plant cannot be operated at the levels required in the contract, then the contractor may have to pay liquidated damages in respect of such a failure (representing the losses suffered by the employer as a result) and it will be for the employer to take on other contractors to bring the plant up to specification if he or she chooses to do so. Given the severe consequences of failing these tests, the reasons for failure can often be contentious issues ultimately resulting in arbitration. For example, with processing plants and power stations there can be disagreements over the extent to which the plant's performance was impacted by the feedstock or fuel that the employer provided. Normally a turnkey contract will specify that it must be of a particular quality or composition and provided in sufficient quantities.

The contractor will usually be liable for liquidated damages should it be in delay as regards the completion date, unless it can demonstrate that it has an excuse for late completion that is allowable within the contract.

Liability

It is rarely the case that turnkey contractors will accept unlimited liability for any breaches of contract they commit. Liability may be limited in nature, for example, so as to exclude some or all of the consequential economic loss resulting from a defect, as opposed to its cost of repair. Other limitations may relate to the total amount of damages that may be payable as a result of breach. These may be limited to a percentage of the contract sum or capped as a specific figure or both. FIDIC provides for a range of limitations both as to consequential loss and total liability. Sometimes these contractual liability limits are in addition to any sums payable by way of liquidated damages for delay or lack of performance, and turnkey contracts often include separate caps on the contractor's liability for delay or performance-related liquidated damages. The scope of these limitations and their effect (including, in some jurisdictions, their enforceability) are also common areas for dispute in turnkey projects.

Profitability

An employer's margins (and indeed the contractor's) may be relatively slim. In some cases, the employer may be using project, as opposed to corporate, finance and therefore relying largely on borrowed money, which adds a layer of financing costs to what may already be an expensive contract package. Even if the employer does not obtain finance on

this basis, a contractor will usually price heavily for the risks it is assuming on a turnkey basis, in particular because it will be adopting the employer's design as its own in addition to the design the contractor supplied, and must develop those designs to satisfy the Employer's Requirements.

It may also add a premium for having to tender within a limited time scale, especially where this has allowed it little time to carry out a comprehensive site assessment and it will be largely accepting responsibility for site conditions, even if these are unforeseeable in the circumstances.

All the above factors have a significant effect on the subject matter and process of a typical construction arbitration concerning a turnkey contract. Both parties may be reluctant to give ground to protect slim margins. And the more economically distressed a project becomes, the greater the likelihood of disputes arising.

Typical claims

In most arbitrations the contractor will be the claimant seeking an extension of time or loss and expense. In the Silver Book the scope for claiming an extension of time is relatively limited. As is the case in virtually all construction contracts, the contractor can claim for time as a result of variations (changes in the scope of work). In addition, the Silver Book (both the 1999 and 2017 editions) provides further grounds on which a contractor can make a claim. While the 2017 Silver Book sets out similar grounds to those in the 1999 Silver Book, there are a number of key differences between the two, including the addition of several new grounds in the 2017 Silver Book, given in the table below.

<i>Grounds for extension of time</i>	<i>1999 Silver Book</i>	<i>2017 Silver Book</i>
Employer's failure to obtain permits	Not included	Clause 1.12 (new to 2017 edition)
Employer's delay in giving possession	Clause 2.1	Clause 2.1
Unforeseeable instruction to cooperate	Not included	Clause 4.6 (new to 2017 edition)
Changes to access route	Not included	Clause 4.15 (new to 2017 edition)
Discovery of fossils	Clause 4.24	Clause 4.23
Delayed testing due to employer's instructions	Clause 7.4	Clause 7.4
Remedial work not due to contractor's fault	Not included	Clause 7.6 (new to 2017 edition)
Any act of prevention by the employer	Clause 8.4	Clause 8.5
Delays caused by authorities	Clause 8.5	Clause 8.6
Employer's suspension	Clause 8.9	Clause 8.10
Interference with tests on completion	Clause 10.3	Clause 10.3
Changes in legislation after the base date	Clause 13.7	Clause 13.6
Contractor's suspension	Clause 16.1	Clause 16.1
Contractor's termination	Not included	Clause 16.2 (new to 2017 edition)
Employer's risks (in 1999 edition)/liability for care of the works (in 2017 edition)	Clause 17.4	Clause 17.2
Force majeure (in 1999 edition)/exceptional events (in 2017 edition)	Clause 19.4	Clause 18.4

Under the Silver Book (as is frequently the case in turnkey projects), there is no relief or recovery for the contractor if it is delayed or incurs additional cost as a result of unfavourable site conditions, whether or not these were unforeseeable, or in respect of inaccuracies in data provided to it by the employer. Any deficiency in the Employer's Requirements is at the contractor's risk with only limited exceptions.

Claims may also arise as a result of inconsistencies between contract documents. Differing standards (e.g., as to level of output required) may appear in documents produced by one or other of the parties, leading to disputes as to the correct standard and which party bears the risk of any extra work necessary for compliance. While there is a priority of documents clause in the Silver Book, this may not assist when the relevant documents are at an equal level of priority so that an arbitrator must interpret the contract documents as a whole to identify the parties' intentions. An example of the difficulties this can cause is to be found in the *MT Højgaard* case,³ in which the Supreme Court held that a provision warranting that part of the works would have a particular design life prevailed over less onerous terms requiring compliance with standards and the exercise of reasonable skill and care, even though the former was contained in a technical specification.

In response to the contractor's claims, the employer may seek liquidated damages for delay or failure to meet performance tests. The employer may also seek general damages in respect of defects in the works where these are not covered by the performance testing regime (or where liquidated damages are found to be unenforceable). Issues may arise as to the contractor's responsibility for defects where they arise from failures of proprietary items, as the contract may contain limited exclusions for failures in this regard.

Both parties may contend that the justification for serving a notice of termination has arisen. In the case of the contractor, common grounds are the employer's failure to make payment on the due date, the continuation of a force majeure event (or, in the case of the 2017 Silver Book, an exceptional event) or failure to submit reasonable evidence that proper financial arrangements have been made for the contract price. The latter argument succeeded in the *Trinidad* case⁴, even though the employer was a public authority.

The employer may contend that it is entitled to terminate by reason of the contractor being materially in breach, in particular, in failing to proceed with the works with due expedition and without delay. It may also contend that a performance security has not been provided or that a force majeure event (or, in the case of the 2017 Silver Book, an exceptional event) has arisen.

The employer will typically claim for the additional costs and any loss or damage suffered in completing the works, whereas the contractor will usually seek to claim loss of profit on uncompleted works. Such claim is preserved at Clause 16.4 in both the 1999 and 2017 editions of the Silver Book, notwithstanding the general exclusion of loss of profit claims.

3 *MT Højgaard A/S v. E.ON Climate and Renewables UK Robin Rigg East Ltd and another* [2017] UKSC 59.

4 *NH International (Caribbean) Limited v. National Insurance Property Development Company Limited (Trinidad and Tobago) and NH International (Caribbean) Limited v. National Insurance Property Development Company Limited (No. 2) (Trinidad and Tobago)* [2015] UKPC 37.

Procedure

In most turnkey contracts, the contractor must give proper notice of any claim for extension of time or additional payment describing the event or circumstance giving rise to the claim. In the Silver Book, such notification must be given as soon as practicable and not later than 28 days after it became aware, or should have become aware, of the event or circumstance. Failing such notice, it will not be entitled to additional time or payment. Although giving such notice of claim is widely acknowledged to be a condition precedent to the contractor's entitlement, contractors often fail to give (or to give adequate) notice, which prejudices their ability to recover what would otherwise have been a legitimate claim.

Under the Silver Book, the contractor must, within 42 days (in the case of the 1999 Silver Book) or 84 days (in the case of the 2017 Silver Book) of becoming aware of a claim, submit a fully detailed claim, which the employer proceeds to determine. Therefore, unlike FIDIC's other books, there is no independent determination at this stage, thus increasing the likelihood of claims being taken to arbitration. Notable changes introduced in the 2017 Silver Book are that the time limits previously applicable only to the contractor under the 1999 edition now also apply to employers' claims for a reduction in the contract price or extension of the Defects Notification Period; and a late notice of claim may be treated as valid if so decided by the employer's representative.

Common issues

The battleground on which the contractor must base its claim may therefore be as to whether it can take advantage of the very limited grounds available to it to seek recompense. While the contract contains no exclusive remedies clause, so that the contractor is entitled to resort to claims at common law where the contract does not preclude such claims, it may have to produce pleadings of some ingenuity to succeed on a claim for, say, misrepresentation as to site conditions. However, extra-contractual claims are not uncommon in turnkey projects. Notably, where a party seeks to terminate the contract, it may rely on its common law right to terminate for repudiatory breach in conjunction with pleading any contractual grounds to terminate.

As a result of the limited scope for claims, it will often be the case that the contractor will need to analyse events surrounding the tender process and subsequent progress of the contract in minute detail to put together its pleadings. It follows that any resultant arbitration will be document-heavy and inevitably involve extensive expert evidence on delay and quantum issues as well as technical matters such as engineering and design.

Choice of arbitrator

As with most forms of arbitration, the choice of arbitrator is a key decision. Given the size and complexity of disputes involving turnkey contracts, it is often advisable to choose a tribunal with extensive experience of these types of projects.

An arbitrator faced with a contention from a contractor that it had been unfairly disadvantaged by a short tender period combined with the onerous terms of the turnkey contract may be tempted to consider favourably any argument (even extra-contractual) to

mitigate the harshness of the situation, such as misrepresentation or quantum meruit. This is where knowledge of the international construction industry, its procurement processes and the execution of projects becomes invaluable to an arbitrator.

Pre-arbitration

It is likely that the parties will have agreed on some means of interim dispute resolution prior to a full-blown arbitration. In the 1999 Silver Book, the dispute adjudication board (DAB) is selected as and when a dispute arises in the same way as an arbitrator. The default position differs, however, under the 2017 Silver Book, which provides for a dispute avoidance/adjudication board (DAAB) appointed at the outset of the project. In other forms of contract, it may be that the parties have agreed a tiered dispute resolution mechanism involving negotiations or a mediation prior to commencing arbitration.

Construction contracts often prevent parties from referring a dispute to arbitration unless they have first submitted to interim dispute resolution methods, such as DABs/DAABs. Decisions rendered by a DAB/DAAB tend to be of interim binding effect and parties cannot typically refer the dispute to arbitration if they fail to issue a notice of dissatisfaction in respect of a DAB/DAAB's decision in accordance with the contract.

An arbitrator may be invited to make an award enforcing the decision of a DAB (in the case of the 1999 Silver Book) or DAAB (in the case of the 2017 Silver Book). If the contract is under FIDIC 1999, the receiving party would be well advised to consider the Singapore decision known as *Persero*.⁵ There, the Singapore Court of Appeal decided that a DAB's decision could only be enforced on the wording of the FIDIC form if an application to enforce by way of interim award was made within an arbitration where all issues before the DAB were raised (generally referred to as the 'one-dispute' approach). To remedy this situation, FIDIC incorporated an amendment to its 2017 suite, but there will be many contracts where the original wording of the 1999 form has been used. Care must therefore be taken when attempting to enforce a DAB's decision by way of arbitrator's award.

Choice of law

Arbitration will generally be the final method of dispute resolution chosen in turnkey contracts as many, if not most, of them involve parties from more than one country. Parties frequently contract on the basis that the procedural law of the arbitration and its seat (location) will be that of a neutral jurisdiction, thus avoiding possible adverse consequences of proceeding in the courts of one or other party. In turnkey contracts of an international nature, the choice of substantive law and the seat of the arbitration will often be different.

5 See the Singapore Court of Appeal's decision in *CRW Joint Operation v. PT Perusahaan Gas Negara (Persero) TBK* [2011] SGCA 33. It should be noted, however, that in subsequent related proceedings, the Singapore Court of Appeal also found that a party need not refer both the merits of a DAB decision and the paying party's failure to comply with that DAB decision in a single arbitration, and that the 'paying party's failure to comply with a binding but not final DAB decision is itself capable of being directly referred to a separate arbitration under cl 20.6' (*PT Perusahaan Gas Negara (Persero) TBK v. CRW Joint Operation* [2015] SGCA 30 [83]).

Procedural issues

In most cases, the contractor is the claimant as matters referred to arbitration will generally involve its entitlement to an extension of time and (usually) loss and expense. Given that most of the risk and responsibility for the works lies with the contractor, the bulk of site records and other information in relation to the progress of the project will be held by the contractor, in particular, those documents related to design and engineering matters, suppliers and subcontractors.

This may put the employer at a disadvantage in the early stages of any arbitration as it may only have had a small team on site, without the capacity to keep abreast of every development as to the contractor's progress. The contractor, by contrast, will often be ready to 'hit the ground running' and its initial statement of case will have been the subject of extensive preparation. The employer's time to respond before arbitration commences may have been limited and such documents as it has been provided with during the project may not be comprehensive.

There is a distinct issue with regards to turnkey contracts that employers' disclosure will probably be limited compared to that produced by contractors, given the employer's input into the project as well as limited supervision on site. For this reason, sequential disclosure is not uncommon, as well as orders for disclosure in phases to suit the progress of the arbitration. Disputes over the extent of the contractor's disclosure are not uncommon.

The International Bar Association (IBA) Rules on the Taking of Evidence in International Arbitration⁶ may be adopted or even expressly referred to in the arbitration clause. These provide a framework and guidelines for the approach to document disclosure for the arbitrator to consider. Given the potential complexity of disclosure issues in turnkey projects, using the IBA Rules is recommended.

While the IBA Rules contemplate that either party may submit a request to produce, the employer may continue to be at a disadvantage in this respect until relatively late in the arbitration by reason of its relative lack of familiarity with the contractor's, and particularly the subcontractors', activities. This problem may be especially acute where a contractor seeks permission to amend its statement of case to take account of developing subcontractors' claims against it, which it is then 'passing on' to the employer.

The employer will need to engage outside experts and, unless it has had a 'watching brief' throughout the project (which is unusual), it will have a substantial learning curve when preparing its response and any counterclaim. By contrast, the contractor is likely to have begun assembling an expert team once it became apparent to it that claims were likely to result in arbitration.

Preliminary points

It is common for preliminary points to be taken in an arbitration to resolve matters that, in some cases, can be determinative of the issue as a whole (and, as a result, can also lead to more meaningful settlement discussions). A common example is whether the contractor complied with the claim notification time limits, such as those found in Clause 20.1 (in the case of the 1999 Silver Book) or Clause 20 (in the case of the 2017 Silver Book).

⁶ www.ibanet.org/Publications/publications_IBA_guides_and_free_materials.aspx.

Other common issues subject to preliminary determination concern matters of contractual interpretation, the existence and effect of any collateral agreements and the extent of any limitations of liability.

Bifurcation

As well as preliminary issues, the complexity of turnkey project disputes often results in tribunals having to bifurcate issues to make submissions and hearings more manageable. Usually this bifurcation is between liability and quantum, but sometimes the project is so complex that tribunals decide to divide between different issues of liability. For example, the causes of delay to distinct sections of the project.

Other issues

In many cases contractors will largely be passing through subcontractors' claims, not necessarily adapting them to suit the terms of the main contract as opposed to the various subcontracts. Ideally, these contracts should be 'back to back' but it is not uncommon for there to be a mismatch between the main contract and subcontracts. Although some of the standard form producing bodies (for example, FIDIC) produce subcontracts intended to integrate with their main contracts, they are not always adopted and bespoke forms may be encountered. Some subcontracts may even have been procured on the basis of simple purchase orders with little regard to the terms of the main contract. If the main contractor does not 'disentangle' differing provisions of the subcontract from the claims it puts forward to the employer, the arbitration is likely to be prolonged with the need for additional rounds of pleadings and requests for further information.

Employers will generally resist any proposal by the contractor to join subcontractors into the main contract arbitration, primarily because the contractor assumes single point responsibility under the turnkey contract, which means there is little incentive for the employer to pursue subcontractors in addition to the contractor. Employers will generally refuse on grounds of increased cost and delay. It is unusual for turnkey contracts to contain provisions for multiparty arbitration although the possibility is referred to by FIDIC in its discussion of particular conditions annexed to the Silver Book. Multiparty arbitration will only be available if all parties concerned agree, whether before or after the dispute has arisen. In complex turnkey projects with numerous contractors and suppliers with an integrated scope of work, it is sometimes the case that all participants are required to sign a dispute resolution deed that acts as consent for them to be joined in multiparty arbitrations. Provisions in the applicable arbitral rules, such as Articles 7 to 10 of the ICC Rules of Arbitration, may also be useful in certain circumstances.

Conclusion

Turnkey projects differ from other construction projects in terms of the high level of risk assumed by the contractor. In particular, the risks associated with design, engineering and fitness for purpose can cause major disputes to arise. In addition, the limited grounds on which a contractor is able to seek relief and recompense can result in the deployment of complex legal arguments surrounding the interpretation of the contract documents, in particular, the specification and scope of work to be performed. Any inconsistencies

between the contract documents or gaps in the specification that have had to be reconciled or filled by performing more work may give rise to a claim for additional time and money by the contractor.

Overall, this allocation of risks can give rise to a range of large and complex disputes that can, in turn, impact on the way in which an arbitration has to be conducted in order to resolve them. For example, they often require significant amounts of factual and technical expert evidence. This evidence needs to be marshalled and presented in an efficient way. The conduct of these arbitrations often benefits from having a tribunal experienced in these types of disputes.

Edited by the academics who run a course on construction contracts and arbitration at the School of International Arbitration, Global Arbitration Review's *The Guide to Construction Arbitration* brings together both substantive and procedural sides of the subject in one volume. Across four parts, it moves from explaining the mechanics of FIDIC contracts and particular procedural questions that arise at the disputes stage, to how to organise an effective arbitration, before ending with a section on the specifics of certain contracts and of key countries and regions. It has been written by leaders in the field from both the civil and common law worlds and other relevant professions.

This fourth edition is fully up to date with the new FIDIC suites, and includes chapters on expert witnesses, claims resolution, dispute boards, ADR, agreements to arbitrate, investment treaty arbitration and Brazil. It is a must-have for anyone seeking to improve their understanding of construction disputes or construction law.

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