Transformation in the construction industry: Keeping pace with change

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Transformation in the construction industry: Keeping pace with change

Three pillars are at the heart of global efforts to boost sustainability and make our built environment cleaner, greener and more socially responsible: construction, energy and technology. These three industries have come to be intricately connected in an era of transformation on a scale never seen before.

By Ellis Baker and Richard Hill

Across the world, leading construction industry players are developing innovative projects and deploying new technology to transform the way we live and work. Meanwhile, energy and mining & metals companies in rural Africa are increasingly installing generating assets and distribution facilities to ensure continuity of energy supply for their operations.

The predicted increase in flexible working may well result in a more widespread move to the development of “smart cities,” with technology built into the heart of daily life.

All this is happening amid the fallout from the COVID-19 pandemic, which has shifted perceptions of how the world may look in the future.

But the pandemic has also forced project owners, developers and contractors to look at their contractual terms more closely, as budgets are cut and works are interrupted due to government restrictions.

This compendium of articles, written by colleagues from offices across the world covers a wide range of issues, examines some of the key topics relating to the shifting relationship between the construction, energy and technology sectors in our rapidly changing world.

It looks at the role the construction industry is playing in the development of distributed energy projects in the US and battery storage in the UK.

In the Middle East, the boom in the construction of smart cities has led to the use of new project structures to embed energy-saving measures within the developments. In Africa, renewable energy projects driven by public procurement programs have attracted investors and developers from around the world, drawn by the vast opportunities on the continent.

Increasing work in a volatile environment, however, means that risk allocation and mitigation are more important than ever. Courts in regions as diverse as Russia, India, Latin America, the Middle East and the UK have all been examining force majeure and risk clauses within contracts. Industry players would be wise to take note of these decisions and trends as markets are beginning to return to post-coronavirus normality.

Insolvency can also be another resultant risk, with recent reforms in the UK, Australia and Singapore affecting the construction sector if contracts are not carefully reviewed and, potentially, redrafted to reflect the new rules.

Although the current environment may have raised awareness of risk in construction projects, there is no doubt that the recent disruption and focus on innovation, new technology and sustainability is bringing immense opportunity to the industry around the world with a real chance of lasting impact.
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Construction considerations in the US distributed energy market

Microgrids are an increasingly attractive means to provide reliable electricity, generated on-site, customized for the needs of the individual location and sensitive to the environment.
Microgrids have flourished with the rise of the “prosumer”—the historically passive energy consumer who is now armed with data and equipped with a new menu of energy solutions to address unique business needs.

In the US, microgrids gained a new level of interest in 2012, after Hurricane Sandy inflicted devastating damage on energy infrastructure and left more than eight million customers without power. Businesses and communities began looking for options that would provide a reliable source of power not dependent on the aging and vulnerable electricity grid.

Since 2012, these concerns have only increased, as wildfires on the West Coast and extraordinary storms elsewhere have emphasized the growing threats posed by climate change.

Improvements in technology since 2012 have increased the range of microgrid options and made them financially feasible for a wider range of users. Alternative business models, such as “energy-as-a-service,” have also created new possibilities.

With energy-as-a-service, a provider such as the Schneider Electric and The Carlyle Group joint venture AlphaStruxure will install a microgrid at its own expense and risk in exchange for the customer’s commitment to purchase energy from the microgrid over a specified term.

Multiple options

The range of options for configuring microgrids, in size, nature and complexity, is virtually unlimited. “If you’ve seen one microgrid, you’ve seen one microgrid,” goes the saying.

The basic elements are one or more sources of distributed energy, such as solar panels, wind turbines or generators, possibly coupled with a means of storage such as batteries, and integrated through a central controller that operates as the “brain” of the system. The microgrid provides one or more local users with continuous power, and when necessary can be “islanded” to operate independently of the larger electricity grid to which it may be connected.

A developer looking to arrange for the construction of a number of microgrids is often interested in efficiency. Practical means to realize this include developing ongoing relationships with reliable individual vendors, including contractors and engineers. A single reliable vendor is good, but a collection of them is better.

“...”

The range of options for configuring microgrids—in size, nature and complexity—is virtually limitless “If you’ve seen one microgrid, you’ve seen one microgrid,” goes the saying

By Aaron Potter and Jess Hollingsworth
Just as modularity is an efficiency driver with respect to the components of a microgrid, it can also be used in the contractual arrangements for construction. For example, a developer could negotiate standard terms and conditions with a group of reliable vendors, leaving only the business terms to be established for individual projects where a vendor in the group is selected.

Another cost-saving option for a sophisticated developer is to unwrap a project, so the developer engages individual vendors directly, potentially using pre-negotiated terms and conditions. This differs from the more traditional model of engaging a design-builder as a single-source provider that in turn engages the individual vendors and charges a commensurate fee.

The largest downside and deterrent to the unwrapped model, namely the risk of gaps between warranties, can be mitigated by at least two factors common in the sector. One is that each component of the microgrid, like solar panels or generators, is typically modular, self-contained and mechanically distinct from the rest of the microgrid, and will have its separate warranty from the vendor of that component.

Another is that the technology involved in such individual components is increasingly proven and reliable, so the developer can be less concerned about warranties than it would be in a situation where a design-builder is delivering a bespoke product that may or may not operate as intended.

Much has changed since Thomas Edison constructed New York City’s Pearl Street station, arguably the first microgrid, in the late 19th century. But despite various legal and regulatory questions that are not yet resolved in the US, microgrids seem well positioned to expand substantially in the next ten years.

Even COVID-19, which has slowed the rate of microgrid construction has exposed the fragility of the “normal” and the need for individual businesses and institutions to make their own arrangements for unexpected events. All of these factors make microgrids an increasingly attractive option.

“Microgrids are well positioned to expand substantially in the US over the next ten years, despite various legal and regulatory questions that are yet to be resolved.”
Untangling a failed energy startup

The commissioning and startup phase of any energy project—liquefied natural gas, power, renewables, petrochemical—represents an important, and potentially perilous, transitional period during the construction process.
Health and safety risks are always a primary concern when hydrocarbons or other precursors are initially introduced into a facility. The actions or inactions of operations personnel—nearly all of whom are undergoing facility-specific training during this period—can also result in substantial damage and significant delays. If that occurs, the contractual allocation of responsibility between owners and contractors will play a crucial role in determining the rights and remedies of the parties.

“Commissioning” generally spans completed construction with commercial operations and is generally recognized as beginning after the completion of all or the majority of construction activities—a completion milestone often referred to as “mechanical completion.” Commissioning includes energization and testing to check that each system or subsystem is fabricated, installed, cleaned, and ready for operation in accordance with the facility’s design.

Once these steps are successfully completed, the facility is typically considered ready for startup. This stage includes the introduction of feedstock, performance testing and the gradual escalation from the operation of individual subsystems to system and facility-wide operation.

Leaving aside the health, safety, and damage concerns intrinsic to commissioning and startup, this period represents an anxious time for both the owner and contractor since they will find out whether the facility—as designed and built—is operational and capable of meeting the performance guarantees for the project.

If a contractor’s guaranteed completion date is tied to the completion of commissioning and startup, which is typically the case if the contractor is responsible for these activities, there is rarely sufficient schedule float to account for any scheduling delays that arise due to unexpected performance or construction issues. Any such delays generally result in delay-liquidated damages becoming due from the contractor and offtake-related headaches for the owner.

Who is responsible?

Given these sensitivities, the ultimate responsibility for commissioning and startup is frequently a contentious point of negotiation between owners and contractors. Sophisticated owners with experienced teams will often demand that the contractor turn over care, custody and control of the facility at mechanical completion to allow the owner to conduct commissioning and startup with unfettered control and decision-making.

Less experienced owners, however, will likely look to the contractor to provide a “turnkey” solution by having the contractor retain custody and control over the facility until commissioning and startup is complete. Even experienced owners may request that the contractor provide these services when the facility contains new, complex or proprietary technology that the owner is unfamiliar with.

Insurance coverage can also play a role in determining who will conduct commissioning and startup, since the insurer will want to be sure that the party responsible for this critical phase can perform safely and without undue risk to the facility.

Even if a contractor agrees to commission and start up a facility, the owner’s staff are nearly always involved in some capacity. Owners must be ready to assume control and operate the plant upon completion of start-up, and contractors are typically requested to provide training to and
incorporate the owner’s operations personnel into the contractor’s commissioning and start-up teams. Mixed teams of contractor and owner personnel, however, can result in difficult questions of liability if a facility is damaged.

For example, during the commissioning phase for a large power generation facility utilizing a mixed team of owner and contractor personnel, damage occurred after the contractor’s control room supervisor instructed the owner’s operations trainee to perform a task using the facility’s distributed control system. The trainee failed to carry out the task correctly and this failure, together with other facility problems, resulted in substantial damage and delay.

The contractor alleged that the trainee’s failure to properly carry out the supervisor’s instructions excused its delay in completing the facility. The owner argued that the parties’ contract required the contractor to both train and supervise the owner’s personnel. Ultimately, an arbitration panel determined that the contractor’s duty to train and supervise imposed some measure of liability on the contractor for the error committed by the owner’s operators.

As a result, owners and contractors should be aware of the potential liabilities associated with mixed commissioning and start-up teams so that these risks can be appropriately allocated by the parties. Common discussion points include the contractor’s right to require that certain owner staff are removed, and what the owner’s responsibility is for certain types of operator failures, including gross negligence or wilful misconduct.

Commissioning and start-up are integral for most major construction projects. Both owners and contractors should carefully consider who is the best party to assume the overall risk of commissioning and start-up; if the contractor agrees to assume these risks, further thought needs to be given on how to allocate responsibility for the owner’s operations staff.

Thinking ahead in these situations can prevent much bigger headaches down the line.

“Owners and contractors should be aware of the potential liabilities associated with mixed commissioning and start-up teams so that risks can be appropriately allocated by the parties ahead of the time...
Impact of COVID-19 restrictions on Mexico’s construction industry

The coronavirus pandemic has had, and will continue to have, profound effects on the global construction industry. There have been and will continue to be substantial delays and cost impacts as a result of labor shortages, disruption to supply chains and financial pressure.
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That impact has been felt in several ways in Mexico. On March 31, 2020, the Mexican Health Ministry published a decree enabling extraordinary actions to address the pandemic. The decree suspended all non-essential activities from March 30, 2020 to April 30, 2020. With the exception of activities related to the conservation, maintenance, and repair of the critical infrastructure that ensures the production and distribution of essential services, the construction industry was included within the scope of the suspension.

The suspension period was later extended until May 30, 2020, and Mexican state governments were able to implement any prevention measures they deemed appropriate in accordance with the general criteria issued by the Health Ministry. As a result, several states tightened the federal restrictions.

On May 14, 2020, the Health Ministry published a further decree that designated the construction, mining and manufacture of transportation equipment industries as essential activities, allowing these industries to resume activities as of June 1, 2020.

In the energy sector, the Mexican Energy Regulatory Commission (CRE) issued several resolutions suspending all pending CRE proceedings including applications, issuance of permits and requests for modifications of permits from March 24, 2020 until August 17, 2020. Another resolution was issued on January 18, 2021, once again suspending all CRE proceedings until federal or local authorities in Mexico City have determined there is no epidemiological risk for the federal public administration to resume its activities.

While the CRE proceedings are suspended, delays in the issuance and modification of permits and to backlogs in processing applications for permits are inevitable. Although CRE is formally closed and proceedings have been suspended, CRE commissioners still meet occasionally to issue resolutions, which in practice has exacerbated legal uncertainty in Mexico.

The pandemic will continue to have profound effects on the construction industry: substantial delays and cost impacts as a result of labor shortages, disruption to supply chains and financial pressure.

By Francisco de Rosenzweig, Rafael Llano, Juan Carlos Llorens and Raffaele Montenero Turco
The various decrees and suspensions have had a major impact on the construction and development of projects in Mexico. For example, a generator was prevented from commencing construction of a photovoltaic project in Puebla as originally scheduled due to delays caused by COVID-19. The generator submitted a force majeure claim to CRE, but CRE has not yet responded to the claim because its activities are suspended. The uncertainty over when CRE will resume activities has had a significant financial impact on the project.

Construction of another photovoltaic project in Sonora was suspended for several weeks due to supply chain delays arising from COVID-19. As a result of these delays, the owner was not able to achieve commercial operation on the guaranteed date under the power purchase agreement (PPA) and the generation permit. The sponsors are currently negotiating with the lenders whether this delay can be considered a force majeure event under the financing documents.

The suspension period prevented a generator in a simple-cycle project in Nuevo León from conducting performance tests and other work required under the PPA, thereby delaying achievement of commercial operation on the guaranteed date. The generator presented a force majeure claim to the Mexican National Center for Energy Control (CENACE). CENACE rejected the claim based on the generator’s failure to provide evidence of the impact of the suspension period on the performance of its obligations. The generator requested that CENACE reconsider the merits of the request, but CENACE’s resolution is still pending.

Is COVID-19 a force majeure event?

The outstanding question in the construction industry in Mexico is whether COVID-19 will be uniformly found to constitute a force majeure event across different construction projects.

Most construction contracts related to complex energy projects contain provisions under which the performance of a legal obligation, and the related contractual liability, are exempted or subject to adjustment as a result of force majeure events. However, it is advisable to review such contractual provisions to determine whether the measures related to COVID-19 could provide elements to invoke force majeure.

Finally, it is worth noting that even in the absence of force majeure or similar provisions, Mexican law exempts liability for failure to perform legal and contractual obligations as a result of force majeure events. Mexican courts have interpreted that force majeure constitutes an event beyond a party’s control, foreseeability or ability to prevent the event. The main legal consequence of a force majeure event is that it exempts a party from performing a legal obligation and, in particular, in the event of failure, excludes the application of liquidated damages. In addition, according to case law, force majeure can be caused by acts of nature, human action or acts of governmental authorities.

Subject to these provisions, and contract regulations, measures related to COVID-19 potentially could provide elements to claim force majeure, as the pandemic and the measures imposed by the federal and local governments are beyond the control of the parties.

As these measures constitute legal obligations that cannot be avoided and were unforeseeable prior to the pandemic, and as it is also reasonable to assume scenarios where these measures, such as quarantines and closure of ports, could make performance of contractual obligations impossible, there are elements that could justify the failure to comply with an obligation due to a force majeure event caused by COVID-19.

In practice, the impact of COVID-19 will have to be analyzed on a case-by-case basis, and it may be some time before the construction of projects in Mexico returns to normal.

The outstanding question in the construction industry in Mexico is whether COVID-19 will be uniformly found to constitute a force majeure event across different construction projects.
Bankability of contractor performance security in Latin American construction projects

Delays in construction projects are common and even more so at the moment, and so the question of ensuring that there is a mechanism for the prompt payment of damages in the event of a contractual breach is arguably now more important than ever.
When embarking on the construction of energy and infrastructure projects in Latin America, contractors are typically required to provide security to back their payment and performance obligations in the underlying construction or supply agreements.

The focus has traditionally been and remains on the liquidity of the instrument, but project owners and lenders are taking different approaches with respect to contractor performance security, as it is not always easy for a project owner to receive payment for damages or remedial work in the event of a contractor breach.

Irrevocable standby letters of credit tend to be the more liquid forms of performance security that contractors commonly provide to backstop their obligations. Depending on its conditions, a project owner as beneficiary under a letter of credit may simply need to deliver a formal notice to the issuing bank in order to receive payment.

As an alternative, contractors can provide parent guarantees or surety bonds, but these instruments typically require a more cumbersome process for project owners to receive payment or performance of the underlying contractual obligation.

Liquid forms of security
This is particularly important in Latin America, where security issued under local law, such as “fianzas” in Mexico or “seguros de caución” in Argentina, may not provide for payment on demand to the project owner as beneficiary. They may instead require legal action such as a final and binding judgment confirming the contractor’s breach, or include conditions such as termination of the underlying agreement.

Although the advantages for project owners to require liquid forms of security such as letters of credit may be obvious, these instruments typically come with additional costs for project owners and risks for contractors. Contractors will include any costs of taking out performance security in the underlying contract price. These may be significant depending on the amount and term of the letter of credit.

Contractors may also not have sufficient lines of credit with their issuing banks to support substantial letter-of-credit capacity, in particular given the impact of COVID-19 on the balance sheets of many international contractors.

Contractor internal risk policies may also impose limitations on the amount and volume of letters of credit issued on a contractor’s

Although the advantages for project owners to require liquid forms of security may be obvious, these instruments typically come with additional costs for project owners and risks for contractors
behalf. These cost and risk factors should all play into a project owner’s decisions regarding adequate contractor performance security in a construction contract.

In addition, lenders may not have the same perspective as project owners in this respect, given the primary focus of a lender on price and time certainty during execution of the construction phase.

A liquid form of security, such as a letter of credit, provides leverage to ensure that contractors perform their obligations laid out in the underlying construction contract. Project owners and lenders may not necessarily agree that the additional cost of liquid security provides added or sufficient value to the project.

This has created a tension between project owners and international lenders in Latin American construction projects, particularly in projects that are more complex, in jurisdictions with greater political and legal instability, or where contractors have less experience with the applicable technology or doubts over credit standing.

**International lender scrutiny**

The importance of liquid security was recently highlighted in a particular case in Argentina after the country reopened to international project financing and the first wind projects were being rolled out. Although the chosen contractor had extensive experience building wind farms, international project lenders heavily scrutinized its security package.

This raises the question of whether project owners should incur additional cost for an instrument they may never use, particularly if they are working with leading international contractors or have previously successfully executed a project in Latin America.

The answer depends on many of the factors mentioned above. In any event, a liquid form of performance security tends to change the dynamic of the contractual relationship between the project owner and the contractors. This is particularly true for projects that experience delays, and which are disputed between the parties.

Contractors tend to feel more pressure to perform when a liquid form of security is on the line, as opposed to a parent guarantee or surety bond. International lenders will likely continue to analyze contractor security packages in Latin American construction projects in view of the added complexities that energy and infrastructure projects are currently facing for timely completion due to the COVID-19-related impact.

However, letters of credit do not represent the panacea for liquid performance security. In recent Mexican and other Latin American energy projects, contractors have successfully prevented or impeded draws on letters of credit by presenting requests for injunctions in the jurisdiction where the letter of credit was issued.

Letters of credit can often require a breach by a contractor under the construction contract as a condition to draw, for example citing delays “attributable to the contractor.” In certain jurisdictions, courts or arbitral tribunals may look into the merits of the underlying breach that triggers the right to draw under the letter of credit.

If they find that the contractor did not breach the construction contract, they may issue an injunction to freeze the draw from the issuing bank’s account located in its jurisdiction by determining that the project owner is not entitled to such draw on the letter of credit.

The financial and practical implications of adequately structuring contractor security packages can have significant influence over the successful and timely completion of construction in the region, and the complexities behind building energy and infrastructure projects in Latin America will likely increase in years to come. This means the debate between project owners and lenders regarding contractor performance security will endure, and the question of “what is bankable?” in an international financing in Latin America will likely remain open.

“The financial and practical implications of adequately structuring contractor security packages can impact successful and timely completion of construction in the region.”
Impact of insolvency reform on the construction industry

With the threat of increased insolvencies as an effect of the COVID-19 pandemic remaining very real, the construction sector needs to be aware of the impact of changes to insolvency laws.
Changes to insolvency laws in the UK, Australia and Singapore may affect how parties deal with the termination of construction contracts where one party to the agreement is insolvent.

Construction contracts commonly contain provisions which entitle a party to terminate the contract if the other party becomes insolvent. These provisions are sometimes referred to as ‘ipso facto’ clauses, because it is the fact of insolvency which gives rise to the right to terminate.

The purpose of ipso facto clauses is to enable a contracting party to end a contractual relationship if the insolvency of the other party is likely to have a real impact on the counterparty’s performance of its obligations.

The motivation for the recent insolvency law reforms, however, is to give insolvent companies breathing space to try to reorganise their affairs and allow viable businesses to continue to trade. One of the ways that this is done is to curtail the operation of ipso facto termination provisions.

The theory applied here is that permitting a contract to be terminated for a party’s insolvency may prevent that company from being able to reorganise its business.

Although the relevant insolvency laws in the UK, Singapore and Australia have much in common, there are some noteworthy differences between them.

The UK’s Corporate Insolvency and Government Act 2020 (CIGA), which took effect on 26 June 2020, applies to any contract ‘for the supply of goods or services’ to a company that becomes insolvent, including construction contracts with limited exceptions.

For these purposes a contractor performing work for an employer will be treated as a supplier, as will a subcontractor performing work for a main contractor.

The legislation prevents reliance upon an ipso facto clause, or a clause allowing it to do ‘any other thing’ as a result of the insolvency. There is, however, no prohibition upon the buyer of the goods or services from exercising rights which arise due to the supplier’s insolvency.

CIGA will prevent a supplier from terminating a contract when the counterparty is insolvent, where the right to terminate arose when the counterparty became insolvent. It also prevents a supplier, during the insolvency period, from making its continued supply of goods or services conditional upon the payment of outstanding charges, or doing ‘anything’ which has the effect of making continued supply conditional upon payment of outstanding pre-insolvency charges.

On these issues, there are two points to note in particular. Firstly, the legislation permits a supplier to apply to the court to relieve it from continuing to perform its contractual obligations in circumstances where this would cause it ‘hardship’. ‘Hardship’ is not defined by the legislation, but it will inevitably take account of the potential financial detriment to a supplier if it is forced to continue performing a contract with an insolvent counterparty.

Secondly, while CIGA would prevent a party from exercising a right to suspend its supply of goods or services as a result of insolvency, it seems unlikely that this prohibition will cut across the right of a party to a construction contract to suspend its works in the event of non-payment of
a ‘notified sum’ as provided for under the Housing Grants, Construction and Regeneration Act 1996 (HGCRA) section 112(1).

However, the prohibition on doing ‘anything’ which would have the effect of making continued supply conditional on payment of outstanding charges is not expressly limited to the exercise of contractual rights, and may affect a party’s rights under section 112(1) of the HGCRA. As CIGA does not expressly address this statutory interfacing issue, the matter will not be free from doubt until resolved by a court.

Insolvency reform in Singapore and Australia

Singapore’s insolvency law reforms took effect through the Insolvency, Restructuring and Dissolution Act 2018, which came into force on 30 July 2020. Australia’s reforms saw amendments to the Corporations Act 2001, which came into effect in 2018.

Singapore’s and Australia’s revised insolvency laws prevent, subject to limited exceptions, the use of ipso facto clauses, but in ways which differ from the UK legislation.

Firstly, unlike the UK law which imposes a one-way ban on ipso facto clauses, the Singaporean and Australian legislation creates a two-way prohibition. In the construction context, this means that neither an employer nor a contractor may rely upon an ipso facto provision to terminate each other due to insolvency.

The Singapore and Australian legislation prevents the use of ipso facto clauses in circumstances where a company has become insolvent but has not gone into liquidation.

In contrast, the UK insolvency laws prevent reliance upon an ipso facto clause where a company has gone into liquidation and has no prospect of reviving its fortunes. This approach may be questionable, given that the purpose of the prohibition on ipso facto clauses is to give companies some breathing space to restructure.

Secondly, whereas the UK legislation precludes the termination of a contract during the period of a company’s insolvency for any reason arising before the insolvency that would otherwise give rise to a right to terminate, the Singapore and Australian legislation does not preclude termination during this period for grounds other than insolvency.

The impact on construction contracts

These insolvency law reforms will certainly have an impact on the drafting of construction contracts and market practices to address insolvency concerns.

Parties to existing construction contracts need to be aware of the impact of the legislation on those agreements. An express right to terminate for insolvency may no longer be valid, meaning that any attempt to terminate in reliance upon the provision may be ineffective, and amount to a repudiation of the contract.

In future construction contracts, termination provisions will need to be drafted to reflect the restrictions on ipso facto clauses in the applicable jurisdiction. Those drafting contracts will have to give closer attention to the possibility of termination for reasons other than insolvency—for example by terminating for convenience.

To mitigate insolvency risks, contracting parties may bring greater focus to requiring their counterparties to procure forms of security which will be available in the event of that party becoming insolvent, for example performance bonds or undertakings from a parent company or financial institution, or through insurance.

That said, the new reforms may also restrict parties’ rights to call on such securities—CIGA, for example, will render ineffective a clause allowing a supplier to do ‘any other thing’ as a result of an insolvency, which could include utilising certain forms of security, depending on the wording of the contract and the relevant security.

Clear drafting and consideration of the law is essential to protect parties. Project owners and contractors alike would be wise to make sure their contracts reflect the new insolvency reforms.

The motivation for the recent insolvency law reforms is to give insolvent companies breathing space to try to reorganise their affairs and allow viable businesses to continue to trade.
UK case law emphasises need for clear drafting in descoping and vesting of goods

In 2020, the UK courts heard two significant cases with an impact on the way construction contracts and subcontracts are drawn up and carried out, affecting employers, contractors and subcontractors to major projects.
In 2021, the UK courts heard two significant cases with an impact on the way construction contracts and subcontracts are drawn up and carried out, affecting employers, contractors and subcontractors to major projects.

One case concerned the limits of a descoping power under an NEC contract, and the other addressed the often complicated issue of when title to goods transfers in a construction project.

Descoping

A Scottish case in late 2020 considered the contractual power to omit works, and highlighted key principles applicable to the question of whether omitted works can be transferred to another contractor. The descoping or omission of works, which is sometimes referred to as a 'negative variation', relates to the removal of part or all of the works awarded to a contractor or subcontractor, and is a common feature of construction contracts.

The contractual right to omit works grants employers and contractors flexibility over the scope of works in main contracts and subcontracts, respectively. However, it may also deprive the contractor or subcontractor of the 'right' to make a profit on the omitted works.

The omission of work from one contractor for the purpose of giving the work to another contractor is a particularly problematic issue, especially where the contract does not expressly permit an omission to be made for this purpose or does not provide for adequate compensation to the contractor whose work has been descoped.

Standard form contracts

The framework governing the right to descope works varies across the standard form contracts. Contract forms typically place some form of limitation on the extent to which works may be omitted.

The FIDIC Red Book 1999 and the FIDIC Red Book 2017 permit omissions to the work, but prohibit the employer from omitting work where the employer intends to hand over the work to another contractor. Similarly, the FIDIC Red Book 1999 provides that after terminating the contract for convenience, the employer shall not execute the works themselves or arrange for any part of the works to be executed by another contractor. The 2017 edition permits the employer to do so only after the contractor has been properly compensated for its losses, including loss of profit.

Not all standard form contracts expressly provide for the omission of works for the purpose of giving the work to another contractor. Although the JCT Design and Build 2016 permits 'the addition, omission or substitution of any work', it does not provide for the provision of the omitted work to other contractors.

This raises the question of whether omitted work can be given to another contractor if a contract does not clearly provide for the right to do so. This was the issue that arose recently before the courts of Scotland.

The claim was brought by subcontractor Van Oord UK against Dragados UK, the main contractor in a project for the design, management and construction of the Aberdeen Harbour Expansion Project (Van Oord UK Ltd v Dragados UK Ltd [2020] CSOH 87).

The subcontract between Dragados and Van Oord incorporated standard form NEC3 subcontract conditions, and the subcontracted works included soft dredging works and the filling of caissons. However, Dragados from time to time transferred omitted work falling within the scope of the subcontract to one of two other subcontractors.

The subcontract said the contractor could give an instruction to the subcontractor which changed the works, and enabled the contractor to omit any provisional sum or other work in these circumstances. Under the terms of the subcontract, the subcontractor had no claim for loss of revenue, opportunity, profit or indirect losses.
loss or damage against the contractor in relation to this.

The court followed the guidance provided in a similar English case which involved a similar omission of work from one subcontractor and the engagement of an alternative subcontractor to carry out the omitted work.

The applicable principles derived from this case law are that a contract for the execution of work confers on the contractor not only a duty to carry out the work but a corresponding right to complete the work which it contracted to carry out.

A clause permitting variation to the works must be construed carefully, so as not to deprive the contractor of its right to complete the work and realise profit from completion. Clear words are needed to grant an entitlement to omit work from one contractor and to transfer it to another.

The motive or reason for the omission of the work is irrelevant. The test is whether the clause relied upon is wide enough to permit the change.

After applying these principles, the court held that Dragados did not have a clear contractual entitlement to omit works and to transfer them to another subcontractor in these circumstances.

**Commercial implications**

Descoping work, whether by a negative variation or even a termination for convenience, may be an uncomplicated matter where the employer simply wants to omit the work in question. But, where an employer wishes to descope work to give it to another contractor, the employer’s conduct is often treated far more seriously in law, and may constitute a breach or even a repudiation of the contract in question by the employer.

Drafting clarity is therefore needed. Contract clauses dealing with variations and termination for convenience should indicate either way whether work may or may not be descope and given to another contractor. Doing so is highly desirable, to prevent there being disputes over the proper scope and exercise of a variations or a termination power.

Secondly, if work is permitted to be descope and given to another contractor, the mechanism for valuing the omission of work must be as straightforward as possible. Commonly, an omission will involve the deduction of the relevant part of the contract price for the omitted work, whilst compensating the contractor for costs it may have incurred prior to the work being omitted, including overheads.

The recoverability of any loss of profit for the contractor on the omitted work may be controversial, and should therefore be addressed in the contractual mechanism for valuing omitted works.

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**1999 FIDIC Red Book**

provides that after terminating the contract for convenience, the employer shall not execute the works themselves or arrange for any part of the works to be executed by another contractor.

**Vesting of title to goods**

The issue of when title to goods transfers from a contractor to an employer can be a critical issue, especially when a party to a project has become insolvent. An English case in early 2020 considered this issue, and the application of vesting clauses and certificates.

Vesting clauses in construction contracts provide for the transfer of ownership of a contractor’s plant, equipment or unfixed materials from the contractor to the employer. One of the main purposes of these clauses is to give the parties clarity as to who owns what, and exactly when title will be transferred from one party to the other.

Vesting clauses sometimes use a complementary device in the form of ‘vesting certificates’, issued by a contractor or supplier, which denote the transfer of title to identified goods.
Construction contracts often provide that title to goods will transfer to an employer when the goods are delivered to the employer’s site. The position is more complicated in relation to goods that are manufactured or held off-site, where the employer may not have sight or control of them.

To this end, vesting certificates are deployed to give the employer comfort that title to the goods listed in the vesting certificate has been, or will be, transferred to it. Vesting certificates have assumed an increasingly important role, given the recent rise in off-site manufacturing.

In the 2020 case of VVB M&E Group Ltd v Optilan Ltd, the English Technology and Construction Court considered a dispute between a subcontractor, VVB, and its sub-subcontractor, Optilan, on the Crossrail project.

Under the contract between VVB and Optilan, Optilan was responsible for providing telecommunication services, including the procurement and delivery to the site of materials for installation.

The contract contained certain provisions for vesting ownership of goods in VVB before they were delivered to the site. Optilan was to issue vesting certificates to confirm the transfer of ownership.

However, Optilan placed an additional condition on the certificates by stating that the transfer of ownership would occur upon ‘receipt of the interim payment’ for the goods, and it duly made a claim for the goods.

VVB had a countervailing claim against Optilan’s claim for the value of the goods and therefore issued a ‘pay less’ notice in respect of Optilan’s claim. In VVB’s view, as set out in the pay less notice, no net amount was due from it to Optilan, but title to the goods had transferred despite the fact that it had not made an actual payment of money for the goods.

Complicating matters, VVB became insolvent. The dispute as to ownership of the goods therefore turned on the construction of the contract and the vesting certificates. The question before the court was whether the transfer of ownership could occur without the ‘receipt’ of payment as provided in the certificates, given that no further payment was due. In VVB’s view, it had already, in effect, paid for the goods, so title had passed to it.

The court held that, whilst the contract contemplated Optilan being paid for the goods, this did not mean that the transfer of ownership was dependent on Optilan’s actual receipt of a sum specified within the vesting certificates. The inclusion of a specified sum was only the first step required in the payment process and could not be read as ‘securing’ payment of the stated values within them.

Accordingly, the court held that the provision of the pay less notice was sufficient to trigger vesting of the goods. No actual receipt of payment by Optilan was required.

The case highlights the critical role that vesting clauses and certificates play under construction and engineering contracts in determining who owns what. In practice, there is some variety in the details of these clauses.

For instance, the FIDIC Red Book 2017 provides for the transfer of ownership of plant and materials to the employer upon the earlier of delivery to the site or payment for the plant and materials in question.

The FIDIC form differs from the JCT and NEC forms, which expressly contemplate payment being made if materials are delivered off-site. The which contemplate the vesting of ownership of materials, whether on-site or off-site, upon payment of a sum for the materials which is included in an interim certificate.

The NEC4 Core Clause 7 provides for the transfer of ownership of plant and materials to the employer upon delivery to ‘working areas’, where plant and materials are outside such areas and are identified in the contract for payment, transfer of ownership happens when the plant and materials are marked by the supervisor. It is the marking of the off-site plant and materials which transfers title, as opposed to payment for them.

Given the differences between these widely used forms of contracts, parties wishing to rely on vesting clauses must give careful consideration as to how vesting certificates, where used, would operate relative to other provisions of the contract.

As is evident, the operation of vesting clauses will often turn on fine distinctions which distinctions highlight the importance of ensuring that vesting clauses clearly reflect the parties’ mutual intention as to when title transfers, and that the parties understand when transfer will take place.

In particular, it is important for construction and engineering contracts to be clear as to the act or event which effects the title transfer, whether that be delivery, marking, certification, the actual payment of money or some other matter.
Opportunities and challenges in battery storage

Increased battery storage capacity can and is being encouraged in order to facilitate the move towards the decarbonisation of electricity generation and can contribute to greater resilience and efficiency of integrated grids. It can also provide solutions for local and off-grid users of electricity, but nevertheless there are still a number of barriers to widespread adoption.
In recent years, the energy markets have seen a lasting and increasing transition towards electricity generated from renewable, sustainable sources. The dependence of renewable energy on the sun and wind results in a variable and relatively unpredictable output, which can create an imbalance between the energy generated and consumer demand in the short as well as the medium term. Energy storage can help to resolve this, with the demand for storage solutions rising in parallel with demand for renewable energy generation sources. Pumped hydro currently dominates the energy storage market overall and accounts for approximately 94 per cent of global market capacity. However, in recent years the use of batteries has increased as a result of cheaper production costs and greater capacity; it is predicted that the installed costs of battery storage could further decrease by between 50 per cent and 66 per cent by 2030, a substantial increase in the market share for storage.

The interest in battery storage globally has grown as more countries pursue and extend renewable energy strategies as well as make a transition to local or smart grids. The increase in the usage of battery storage has also been facilitated by advances in the digital technologies harnessed by companies to provide ancillary services which benefit utilities and grid operators. Examples of this type of innovation include aggregation models, powered by artificial intelligence and predictive analytics which allow a number of distributed energy resources to be grouped together and create capacity while retaining flexibility and fast response times.

There is also now a recognition that battery storage is faster, cleaner and cheaper than traditional “peaking” plants, which are able to respond quickly to balance fluctuations in the grid but are commonly gas or diesel-fired. Lastly, battery storage has lower transmission costs on the discharge side and can also be provided either as an integrated part of generation facilities being developed, an addition to existing generation facilities or on a stand-alone basis.

**Key challenges**

Despite the benefits of battery storage, there do remain a number of barriers to widespread adoption. Regulatory policy tends to lag behind changes in the evolving sector, although there are some positive signs that regulators and legislators are seeking to make policy changes that will benefit the industry. For example, following a 2019 consultation, the UK government announced it would exempt almost all battery storage projects—from the nationally significant infrastructure projects (NSIPs) regime. This means planning permission for battery storage falls under the Town and Country Planning Act instead, which should reduce the development time and cost investment required under the NSIP regime.

Another key challenge for battery storage is the unpredictability of revenues over the medium to long term. Battery storage projects will typically have multiple revenue streams and, while those can assist in offsetting the risk associated with any individual revenue stream, such “stacking” of revenues brings its own challenges for their longer-term investment prospects.
Compared to other energy storage methods, revenue contracts for battery storage are still relatively short. The length of an enhanced frequency response contract, for example, a mainstay in a battery storage revenue stack in the UK, is usually between one month and two years.

It is not just money matters which pose a challenge to the uptake of battery storage. The limited shelf-life of batteries, the amount and nature of the raw materials required for their production, and the considerable pollutants generated during manufacturing, storage, treatment and disposal of large-scale batteries in particular have given rise to significant environmental and more general sustainability concerns.

**Contract structure**

Given the various components making up a battery storage project, the contract structure for any project is likely to be correspondingly simple or complex.

Battery storage projects to date have generally been let using either an engineering, procurement and construction contract, which often involves a contractor joint venture between the main battery supplier and a construction and installation contractor; or by letting various elements of the works separately, in effect providing the batteries and associated equipment as ‘free issue’ materials to the construction and installation contractor.

Battery storage projects often use nationally or internationally recognised standard form contracts with amendments as necessary to reflect the relevant procurer’s requirements as to risk transfer and retention.

Key terms particular to battery storage projects include enhanced environmental indemnities and payment terms reflecting the up-front cost of reservation and manufacture. Defects liability periods or warranty periods are also amended to reflect the expected life cycle of the batteries and related equipment, as well as the traditional expiry period for related infrastructure.

On the operation and maintenance aspects, leaving aside routine activities, any requirements as to ongoing performance levels of the assets are usually provided under and tied to ongoing arrangements with the relevant suppliers, or dependent upon operating and related requirements being complied with.

Given the fast-paced development in the sector, a more recent development has been to negotiate and include terms for upgraded equipment to be provided and installed when available to the project specifically or in the market more generally.

**A market set for growth**

Storage as a subsector within the electricity sector is one which is a necessary and now established part of the energy transition in that industry. The increase in renewable generation combined with improvements in both battery technology, the range of ancillary services and its uses, whether as part of a local grid or an isolated user of electricity, clearly indicate that demand for and reliance on battery storage will continue to grow—something that is being increasingly recognised by governments and regulators both in developed and developing markets.

From a construction perspective, while it is true to say that there are certain procurement choices to be made, in common with the early days of the solar sector, the market is currently dependent upon and effectively led by the manufacturers. However, more contractors specialising in battery storage will undoubtedly emerge both due to its importance and scope, and also as a result of the ability of storage systems to be integrated within existing and new-build power generation projects.

Demand for and reliance on battery storage will continue to grow—something that is being increasingly recognised by governments and regulators both in developed and developing markets.
Opportunity and risk in African construction contracting

Investment in infrastructure in Africa has soared in recent years, and construction activity has risen with it.
Although there was a drop in activity in 2020 caused by the COVID-19 pandemic, particularly in East Africa, in the past few years the African continent has seen sustained activity driven by private and foreign investment in major projects in the transport, oil & gas, and renewable energy sectors in particular.

Projects have included the construction of the first banked liquefied natural gas (LNG) terminal in sub-Saharan Africa in Port Tema in Ghana; Total’s multibillion-dollar investment in a Mozambique LNG project; the US$10.9 billion Tahrir petrochemical complex in Egypt; and the Indorama Eleme’s multi-stage fertilizer project in Nigeria.

Other activities generating interest include a sustained focus on the development of renewable energy and electricity generation generally. For example, the South African Department of Energy launched a risk mitigation independent power producer (IPP) program in 2020 aimed at procuring 2,000 MWs of electricity on an expedited basis.

South Africa is also expecting to launch the fifth round of its well-established renewable energy IPP program in the first half of 2021, aimed at procuring a total of 6,800 MWs of energy from wind and photovoltaic generators. Botswana has published an integrated resource plan that includes an allocation for the procurement of energy from photo voltaic, concentrating solar power and coalbed methane projects to reduce its reliance on its neighbors for electricity.

Interest in these types of projects in Africa has been encouraged through the involvement of development finance institution-sponsored and auction-driven renewables procurement programs, which have helped reduce costs significantly. This type of procurement increases the potential for price discovery, allows financing to be tailored to specific programs or government objectives, and helps countries attract more private investment through clearer and transparent procurement frameworks.

These auction processes have not, however, been without flaws. Delays between the submission of bids and the awarding of contracts or the commencement of construction have been common, exposing developers and contractors to inflation and currency fluctuations, and negatively impacting the appetite of some developers for such projects.

The construction sector has seen sustained activity across Africa over the past few years, driven by private and foreign investment in major transport, oil & gas and renewable energy projects.
**The Chinese connection**

Another important and consistent feature of many major projects in Africa has been the continued support and involvement of Chinese contractors, which remains strong, although last year saw a slight decline.

Research by Deloitte found that China funded 20.4 percent of African projects in 2019 and 15.1 percent in 2020, making it the second-biggest source of funding after African governments themselves. Chinese contractors constructed an estimated 140 African projects in 2019 and 121 projects in 2020, accounting for more than 30 percent of all major projects in both years.

While this represents a decrease from the highs experienced in 2018, it is also broadly in line with the drop in major construction activity experienced during and as a result of the 2020 pandemic.

Despite this slight decrease in its involvement, China still maintains a strong presence in various regions, particularly in southern Africa, where it has funded in excess of a quarter of all major projects in this period. Chinese funding and construction activities have mainly been directed toward the mining, oil & gas and renewable energy sectors, with South Africa and Mozambique being the two largest beneficiaries, according to IJ Global.

In West Africa, Nigeria has been the largest recipient of funding sourced by China, which has been directed toward Nigeria’s transport sector, particularly the financing and construction of standard-gauge railways.

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**African construction projects will have weathered the global pandemic relatively well due to the great drive for infrastructure, direct foreign investment, international support and the increasing robustness of contractual terms**

- **30%** Chinese contractors constructed an estimated 30 percent of all major projects in Africa in 2020.

**Source:** Deloitte

**The risks of African projects**

Risk allocation in African projects broadly follows international trends. Key risks specific to the continent that can be especially challenging include currency volatility—this has, for instance, limited debt funding sources for South African rand-denominated IPP programs to local South African banks. Meanwhile, the comparative unpredictability of commodity prices and interest rates makes fixed and firm price contracts less common than elsewhere, or significantly increases the costs of these contracts.

Secondly, the COVID-19 pandemic continues to pose a threat to the completion of projects as a consequence of the actions taken by various authorities to stop the spread of the virus. Many African countries, such as Nigeria, Ghana, Kenya and South Africa, have imposed hard lockdown measures in response to both waves of the pandemic, which have resulted in delays to existing construction projects.

Finally, political instability, concerns with business practices and conflict in certain areas represent significant threats to the construction of infrastructure in these areas. There have been a number of eruptions or escalations of conflict in certain areas which have the potential of delaying significant projects, whether as a consequence of the proximity of conflict to those projects or as a result of such conflict.

Despite these risks, overall projects in Africa are still thriving. They will have weathered the global pandemic relatively well because of the great drive for infrastructure on the continent, direct foreign investment and international support, and the increasing robustness of contractual terms.

All this allows for better risk mitigation, which should encourage continued interest in the construction of and investment in African infrastructure projects for years to come.
Finding an appropriate contractual bedrock for procurement of mining & metals projects in Africa

With its huge mineral potential, Africa is likely to see a number of mining projects move from exploration and feasibility to construction. But mining is an inherently risky business, and finding the most appropriate procurement and contractual framework is key to ensuring that projects developed on the continent are delivered on time, on budget and to the relevant quality and purpose requirements.
Recent commodity price rises and a relatively positive commodity price outlook, particularly in metals, have fueled renewed interest in greenfield and brownfield expansion projects in the African mining & metals sector. But with various African jurisdictions facing their unique set of challenges—real or perceived—for the successful development of a mining or metals project, the question of how to move a project into the construction phase remains key to all new projects.

Exploring the options
One of the most common structures for procuring construction works in the mining & metals sector is where a contractor is engaged by the project owner to provide services in relation to engineering, procurement and construction management (EPCM). Under such a structure, the EPCM contractor does not itself carry out much, if any, of the physical work, but is responsible for managing on behalf of the project owner the engineering, procurement and construction work carried out by others. The EPCM contractor itself will also often perform limited engineering services, usually in relation to whole-of-system design and integrating the various work packages. The structure is well suited for African mining & metals projects when traditional EPCM contractors may be reluctant to commit to deliver a project on a lump-sum “turnkey” basis. This structure has been commonly implemented in projects across Africa, including in the Nacala Corridor Railway and Port Project in Mozambique and Malawi, the Tasiast gold mine expansion in Mauritania and the Ambatovy nickel project in Madagascar.

Another common structure used for mining & metals projects is an engineering, procurement and construction (EPC) contract. In these structures, a single EPC contractor is responsible for engineering, procuring and constructing the project—or a defined part of the project—on a “turnkey” basis, undertaking to carry out all the work necessary to complete the project (or defined part).

The concept of “turnkey” contracting is similar to the purchase of a car—where the manufacturer is responsible for designing, procuring or fabricating the necessary parts, and then assembling the car. When the car is handed over to the customer, all the customer needs to do to operate the vehicle is to turn the key in the ignition. In these arrangements, the EPC contractor takes on the majority of delivery risk and is responsible for transferring a completed project (or defined part of the project) to the owner. The EPC contractor must generally bid a fixed lump sum to

The question of how to move a project into the construction phase remains key to all new mining & metals projects in Africa
The needs of mining & metals projects are wide and varied, and range from simple to the most complex of construction works.

complete the works, although hybrid pricing structures can be agreed, and must complete the works by a set date. Failure to complete the works on time means delay liquidated damages will be payable.

Entitlements to additional costs and extensions of time will generally be limited, and the EPC contractor will be responsible for any work carried out by any subcontractors as if it was doing the work itself.

While the EPCM model has been more dominant in African mining & metals projects, the “turnkey” EPC model has also been used on some projects, particularly where Chinese EPC contractors are involved, or where projects (or at least parts of them) are perceived as being less prone to time and cost overruns.

A third alternative is for the project owner to procure various contractors and consultants directly, and to manage the interface of the contractors and consultants using its own contract administration staff. A project owner may also employ a third-party project management consultant (PMC) to assist with the management of the project owner’s various contractors and consultants. However, a PMC contractor will generally not carry out any engineering or design in relation to the works, so the full technical interface and overall system design risk rests with the project owner.

Influencing factors
Various factors will be relevant to project owners when selecting a procurement strategy for a particular mining or metals project.

The needs of mining & metals projects are wide and varied, and range from simple works, such as the construction of site access roads and accommodation camps, right through to the most complex of construction works, such as deep underground tunneling and shaft-sinking for mining projects, and refineries and process plants in the metals sector.

Perhaps most important is the type of works being procured. Generally, contractors will not price works on a lump-sum basis where the works involve risks that are either beyond the control of the contractor or cannot be reasonably quantified.

Sub-surface ground risk is one such area, particularly if a mining project involves long underground tunnels or deep shafts, where it may not be feasible to use bore holes to profile the sub-surface conditions to a high enough level of certainty to enable a contractor to accurately price the cost of carrying out the works. Similarly, in the metals sector, EPC contractors may be reluctant to take on performance risk for certain
metallurgical technologies provided by third-party vendors.

Other, more defined, parts of a mining project may be more suitable for lump-sum fixed-price EPC contracting. These could include site access roads, certain civil works, site camps, back-up power generators and power solutions, key pieces of equipment, and even major related port and rail facilities.

Examples of parts of African mining & metals projects being let on an EPC basis include the works for a gold processing facility and associated power and water utilities at the North Mara Gold Project in Tanzania and back-up power facilities for the Lefa gold mine in Guinea.

In addition to the above, the size of a project may limit the number of creditworthy contractors able to assume project delivery risk under an EPC contract. For some mega-projects, there may well be no contractor able or willing to deliver the project under a fixed lump-sum EPC structure, even if the project owner was prepared to pay an appropriate risk premium. In such cases, the project would need to be procured either under an EPCM structure, or directly, using a number of separate work packages.

Mining & metals projects effectively financed through a project owner’s balance sheet will generally have the benefit of more flexibility in terms of the types of procurement structure that can be accommodated, particularly where the project owner is a mining major:

- If a limited-recourse project financing structure is used to finance a mining or metals project, financiers will look for the construction procurement structure to demonstrate limited risk of there being an unfunded cost overrun. This could be either by having a single EPC contract, or through an EPCM contractor managing a limited number of works packages, each with appropriately defined technical interfaces, a (relatively) fixed price and an appropriately sized project contingency to account for possible increases.

With Africa firmly within the sights of China’s Belt and Road Initiative, Chinese lenders and EPC contractors have become increasingly prominent across the continent. For certain projects, Chinese EPC contractors have also enabled mining companies
Mitigating risk outside a turnkey procurement structure

While the time and cost certainty offered by a conventional turnkey EPC contract structure is appealing to many project owners, particularly those with more limited financing options, the nature of the construction works required for many major mining & metals projects will mean that an EPC contract solution is not commercially feasible. Where this is the case, the project owner’s procurement strategy should focus on other approaches to mitigate against retained project delivery risk.

While many separate suppliers and contractors are usually required to deliver a mining or metals project, project owners can limit or pass interface risk down to their contractors by minimizing the number of contractors either directly engaged or engaged by the EPCM contractor.

The project owner should ensure that there are clearly defined battery limits for the works to be carried out by these “tier 1” contractors, and that the technical interfaces between work packages of the tier 1 contractors are minimized and sensible from a technical perspective.

For African mining projects, which often require the construction of significant amounts of related infrastructure, this usually means separating the construction of the infrastructure out from the construction of the actual mine.

Where projects are procured using an EPCM structure, the role of the contractor is central to mitigating any time and cost overruns, and to ensuring that quality and overall “fitness for purpose” requirements are achieved across the project.

EPCM contractors will not normally take material responsibility for the performance of the contractors they manage, and the contractor’s liability in relation to the performance of its own management services will also generally be limited by reference to a percentage of the total fees paid to the EPCM contractor. These fees are usually relatively low when compared to the overall cost of the project.

While the limitations on liability under an EPCM contract mean that the bulk of project delivery risk ultimately remains with the project owner, the EPCM contractor can be further incentivized under the EPCM contract to deliver the project successfully.

What will be appropriate will depend on the specifics of the project and the project owner’s priorities. However, there is plenty of choice when it comes to incentive mechanisms, including an incentive payment to the contractor if the project is completed ahead of schedule.

Delay liquidated damages can be charged if the project is completed behind schedule, although usually only where such failure is attributable to the EPCM contractor. Unlike under an EPC contract, the delay liquidated damages payable may well not be significant in comparison to the overall project costs and the likely losses suffered by the owner.

Cost-saving sharing schemes can also be attractive. In these, the EPCM contractor is entitled to a percentage of the costs saved if the project is delivered under the projected budget. This scheme should be self-funding, but project owners need to make sure that quality is not compromised, so they may want to build in other key performance requirements or similar into these types of incentive schemes.

On the other hand, if actual project costs exceed the budget, there can be a reduction to the percentage of profit awarded.
paid to the contractor on any elements of the EPCM contract price calculated on a reimbursable cost-plus basis.

Contractors could also receive bonus payments for achieving certain other key performance indicators, such as requirements relating to health and safety, environmental, community engagement and so on. All these areas are being increasingly scrutinized in the delivery of African mining & metals projects, and need to be closely managed to maintain good relations with host governments and key stakeholders.

Management of contractors
The capability of the project owner’s team, including the EPCM contractor or PMC where appointed, to administer the various contracts and manage the interface and integration of the various works packages is key to mitigating the project delivery risk retained by the project owner.

Obligations relating to interfacing can also be built into the various works contracts, through detailed site access protocols; detailed requirements for contractors to exchange information in relation to the design of interface works where there are complex technical interfaces; and including general obligations in relation to cooperating with other contractors engaged by the project owner.

Project owners can mitigate project delivery risk by selecting contractors with strong track records. Contractors should have the technical and financial capabilities to deliver on their contractual promises, and experience with working on comparable projects. Ideally, the key contractors should also have a track record of successfully working together.

Previous in-country experience is particularly important for international contractors working in Africa. If international contractors can adequately demonstrate how they have—or will—deal with local laws and regulations in relation to country-specific issues, this should reduce the likelihood of disputes with the project owner and/or the host government. Issues that could give rise to disputes during the construction phase include taxation, employment of local labor and migration of foreign labor, currency control issues, local content requirements, incorporation of local subsidiaries or branch offices, and the acquisition of local permits.

Making sure there is an appropriate float or buffer in the project schedule and budget for critical items can also help mitigate again the risk of time and cost overrun, and help address most unexpected outcomes. Appropriate float in the project schedule will also reduce the risk of contractors claiming prolongation costs for delay and interference caused by other project owner contractors.

Settling on a structure for new projects
Despite exploration activities in Africa reportedly dipping during the COVID-19 pandemic, S&P Global Market Intelligence still reported an approximate US$1 billion spend on exploration activities across the continent in 2020. With growing demand and a generally positive outlook for commodity prices, a pipeline of African mining & metals projects can be expected to ultimately reach the construction phase.

Exploring the procurement options for the construction of any mining & metals project is an important issue, and should be considered when assessing the feasibility of a project and kept under review during the construction phase.

Mining & metals projects are wide and varied in nature, and different solutions, including a combination of models, will be appropriate for different projects. However, regardless of the project, a considered and appropriate construction strategy will help underpin the successful delivery of any project, not just for the project owner, but for all stakeholders.
The past few years have seen a shift in the way contracts for construction projects in Russia have been drawn up and scrutinized in response to growing awareness of risk.
Contracts in the construction industry in Russia have long involved striking a balance between the legitimate expectations and interests of the owner and the contractor. Russian industrial projects are commonly developed using a range of procurement structures. These include single engineering, procurement and construction (EPC) turnkey contracts as well as more complex multi-package arrangements in which the owner, typically a Russian entity, separately contracts the construction works with one or more local contractors.

When engaging international contractors in Russia, owners often seek to maximize risk transfer to the contractor within the limits of the selected procurement model. This can be due to the requirements of financing banks, or simply results from the expectations of stakeholders and investors, and their experience of market practice in Russia.

English law contracts are commonly used by international parties for Russian projects, as this allows a level of freedom of contract that would be difficult to achieve under a contract governed by Russian law.

From a contractor’s perspective, English law provides a neutral choice of governing law and may be welcomed by the contractor. However, it can prove to be a double-edged sword if, as is often the case, the owner’s proposed contract terms prove to be onerous for the contractor.

Increased owners’ demand under FEED and EPC contracts

In recent years, front-end engineering and design (FEED) and EPC contracts proposed by owners for large industrial projects in Russia have generally become more demanding in terms of the requirements and risks placed on the contractor. In some cases, this is because contracts are becoming longer and more detailed. This is a natural development, as clauses are refined and lengthened over time in an effort to protect the owner’s position and deal with every eventuality.

That said, the extent to which contractors are willing to take on these risks will of course depend on the specific circumstances of the project, and such additional risks may result in further contingencies being included in the price.

One potential area for negotiation relates to which party assumes or retains responsibility for obtaining approval of the design documentation by the relevant Russian authorities, and linking payment of final installments of the contract price to obtaining such approvals. It is common for an international FEED contractor to engage a Russian Design Institute as a subcontractor to confirm

English law contracts are commonly used by international parties for Russian projects
that the design documentation complies with Russian laws and regulations, and to secure approval of the design documentation.

However, the FEED contractor may propose that any deadlines—and associated delay liquidated damages—under the FEED contract relate to delay in completing the FEED package, not delay in acceptance of the design documentation by the relevant Russian authorities.

Similarly, contractors frequently propose that any performance bond under the FEED contract will be reduced upon completion of the FEED package and its acceptance by the owner, not approval by the relevant authorities. On the other hand, from an owner’s point of view, it is important to ensure that the contractor is incentivized to prepare design documentation strictly in compliance with Russian laws and regulations and promptly procure the relevant approvals, as failure to do so could delay the project.

Another key issue is the EPC contractor’s liability for claims incurred by the owner from other contractors. It is common for large industrial projects in Russia to involve multiple contractors and complex interfacing requirements. In such cases, defects in the contractor’s works may potentially result in modifications to other parts of the project, causing the owner to incur additional costs. Some owners of recent projects have tried to pass this risk, either entirely or in part, on to the contractors.

It can be difficult for owners to persuade a contractor to accept full liability for claims by other contractors. Liability for claims under third-party contracts is sometimes excluded under EPC contracts, as such claims are difficult for contractors to predict. Where a contractor does agree to undertake this risk, it may only agree to be liable for a portion of any claims by other contractors and require its overall liability in respect of such claims to be capped.

**Force majeure**

Another topic of significance at present for English law-governed FEED and EPC contracts in Russia is force majeure. Owners typically seek to define force majeure relief very narrowly, particularly with respect to any right of the contractor to claim additional costs or terminate the contract for extended force majeure.

While this is not a new development, the COVID-19 pandemic has caused force majeure clauses to be more closely scrutinized. For large Russian projects in the petrochemical and industrial sectors, the time from contract signature to completion of the project can be significant, with the most potential for COVID-related disruption occurring during the construction phase.

Given the current level of day-to-day uncertainty, it is hard for contractors to plan so far ahead and adapt their commercial proposals to deal with any potential disruption. However, given that many construction sites in Russia remained active throughout 2020, owners have not been terribly sympathetic to granting widely defined relief for COVID-19 and some may seek to exclude COVID-19 claims relating to home office or design works, particularly if they are performed outside Russia.

"It is important to ensure that the contractor is incentivized to prepare design documentation strictly in compliance with Russian laws and regulations and promptly procure the relevant approvals."
A sustainable future: Smart cities in the Middle East

Urban environments are in the middle of a revolution. The powers of technology and data are being harnessed to make cities safer, more efficient and more sustainable.
The implementation of digital and data-driven technologies has the power to enhance the socio-economic potential of these new “smart cities” and to improve the day-to-day lives of those who live there. Countries in the Middle East have been remarkably proactive in developing smart cities, with a tendency to build them from the ground up rather than incorporating technology into existing environments. Saudi Arabia stands out especially for its ambitious giga-projects. It is currently developing four significant smart cities—NEOM, Amaala, Qiddiya and the Red Sea Project—each involving multibillion-dollar construction contracts.

The largest of these projects is the planned US$500 billion mega-city, NEOM, which according to recently unveiled plans will incorporate a zero-carbon hyper-connected city called “the Line.” The aim is for the Line to be carbon positive, and for it to be powered by clean energy, artificial intelligence, machine learning and predictive analytics. The Line will harness an estimated 90 percent of available data to enhance infrastructure capabilities—a percentage significantly greater than that utilized in any existing smart city. The first smart city development in the Middle East, the partly constructed Masdar City in Abu Dhabi, relies on renewable energy sources and utilizes sustainable building materials such as low-carbon cement and recycled aluminum. The development incorporates a number of smart solutions that reduce energy and water consumption, and offers an integrated smart network of electric or zero-carbon transportation options. The city is also being used to run pilot projects to test new renewable energy innovations developed at the Masdar Institute of Science and Technology. Meanwhile, the Zayed Smart City project, also in Abu Dhabi, utilizes information technology and the Internet of Things to upgrade the city’s existing infrastructure. The drive to sustainability in the region has also led to significant investment in renewable energy. Saudi Arabia has established the Renewable Energy Development Office, which is working on a substantial pipeline of solar and wind projects. Abu Dhabi has already built the largest single-site solar park in the world at Sweihan, the 1.78 GW Noor Abu Dhabi. This will, however, be surpassed by the 2 GW Al Dhafra solar project, also in Abu Dhabi, which is currently under development.

“Countries in the Middle East have been remarkably proactive in developing smart cities, with a tendency to build them from the ground up.”

By Ibaad Hakim and Frederic Akiki
Financing was secured late last year and operations are scheduled to begin in 2022.

In addition to new smart city and renewable energy projects, Middle Eastern governments have also been looking to upgrade their cities’ existing infrastructure.

One energy efficiency initiative that has become increasingly prevalent in the Middle East is the establishment of specialist energy service companies (ESCOs) for the implementation of energy efficiency measures. Typically, ESCOs either identify potential energy-saving measures by carrying out a detailed assessment of existing infrastructure, or implement energy-saving measures through the design, equipment procurement and operation and maintenance of a smart city project.

Government-backed super energy service companies (Super ESCOs) are being established by governments or through public-private partnerships to function as an intermediary between government entities and ESCOs. These Super ESCOs are acting as catalysts for the implementation of smart city and renewable projects in the Middle East.

A Super ESCO project structure typically involves the Super ESCO contracting with the government or public entity to set out the parameters for the energy efficiency measures to be implemented. The Super ESCO then separately contracts with the private ESCO to implement energy-saving or broader sustainability measures.

Super ESCOs are well placed to leverage their credibility as public institutions, and to overcome restrictions in public sector contracting and procurement rules. They are also able to assist in accessing project financing for energy efficiency projects.

The Middle East continues to develop a reputation as an increasingly important hub for the development of smart cities and the implementation of smart technologies in urban spaces. Given the significant investment in smart cities being made by various countries in the Middle East, there will continue to be a need for construction companies, governments, technology firms, and design and engineering firms to collaborate and adapt to ensure that the ambitious aims of smart cities can be fulfilled.

While the concept of smart cities remains an evolving target for many countries today, it is clear that smart cities will play a pivotal role in sustaining and managing the growing urban population while sparking social transformation, efficiency and sustainability. The more these smart cities innovate, the greater the need for the construction industry to adapt and remain responsive to the evolving needs and requirements of governments.

The Middle East continues to develop a reputation as an increasingly important hub for the development of smart cities and the implementation of smart technologies in urban spaces
Saudi Supreme Court clarifies COVID-19 effects on contractual arrangements

COVID-19 has had a significant effect on construction projects around the world, delaying work and forcing many parties to go back to their contracts and examine whether there is scope for a claim, and Saudi Arabia was no exception.
In December 2020, the General Assembly of the Saudi Supreme Court issued a decision setting out a series of legal principles in relation to COVID-19 and its effects on contractual commitments and obligations, granting courts the power to adapt contractual obligations, taking into account the circumstances resulting from the pandemic.

The Supreme Court issued its decision on December 23, 2020 following a request from the Royal Court and after consideration of, among other things, the relevant royal orders, ministerial decrees aiming at addressing the effects of the pandemic, related laws and Shari’a principles.

The court confirmed that the COVID-19 pandemic should be considered as an “emergency situation” when it is not possible to fulfill a commitment or implement a contractual obligation without incurring unusual losses. Alternatively, it can be considered as “force majeure” if the performance of the contract has become entirely impossible due to the pandemic.

Applying the effects of either an emergency situation or force majeure to contracts and obligations is subject to five conditions. Firstly, the contract must have been concluded before the start of the precautionary measures relating to the pandemic, and the contract must have been continued after the measures were put in place. Secondly, parties need to be able to prove the pandemic has directly impacted the contract in an unavoidable manner.

Thirdly, the parties must show that the direct impact of the pandemic on the performance of the contract is the “sole and independent cause” of the relevant impact.

Fourthly, the aggrieved party must not have waived or compromised its rights; and finally, for a claim to be brought, the effects and damages of the pandemic cannot be dealt with by a special law or by a decision of the competent authority.

The Supreme Court confirmed that, at the request of a party, Saudi courts have the power to amend contractual obligations that were impacted by the COVID-19 pandemic in order to achieve “justice.” It set out specific principles that apply to construction, supply and other related contracts, and to lease agreements.

The Saudi Supreme Court has ruled that the pandemic is to be considered “force majeure” or an “emergency situation” should the performance of the contract become entirely impossible due to COVID-19.
Powers to adapt contracts

The Supreme Court explained that if the pandemic has resulted in an increase in the value of materials, manual labor, operation and so on for the contractor, then the court has the power to increase the contract price up to what would be considered an appropriate increase, and the employer has the right to seek termination of the contract due to the price increase.

If the increase in the price of materials is only temporary, then the court has the power to suspend the contractual performance for the relevant duration of the price increase.

If the pandemic has caused a shortage of commodities or goods in the market, then the court has the power to decrease the quantity of supply proportionally and to the extent it thinks is sufficient to mitigate the unusual harm.

In the event of the temporary unavailability of materials in the market due to COVID-19, the court has the power to suspend the relevant obligation for the temporary period, provided that the vendor does not suffer severe or unusual damage from the suspension. However, if the vendor does suffer such damage, then it has the right to seek termination of the contract.

Where the unavailability of materials is “absolute”, leading to the performance of all or some contractual obligations becoming impossible, then the court has the power to terminate the contract or annul the elements of the contract that cannot be performed, at the request of one of the parties.

If the contract imposes an obligation to perform works, such as in a construction contract, and the pandemic has caused a delay in these works, the court has the power to suspend temporarily the implementation of the employer’s corresponding remedies. However, if the employer suffers severe and unusual damage in such a case, it can request termination of the contract.

There are also certain conditions applying specifically to lease contracts. If, due to the pandemic, the lessee becomes totally or partially unable to benefit from the lease, the court has the power to deduct from the rent an amount proportional to the decrease in the intended benefit of the lease.

The lessee may not have the right to terminate the lease contract if the tenant is delayed in paying rent during the period in which the lessee was unable to make use of the property, in whole or in part, due to the pandemic.

Other pandemic-related considerations

The Supreme Court held that courts must consider the extent of the impact of the pandemic on the contract at issue based on the relevant business activity, and assessment of damages should not exceed the period of the pandemic’s impact on the contract.

Courts should also consider dis-applying penalty or liquidated damages clauses or fines, in whole or in part, if there has been a delay due to the pandemic. Additionally, clauses limiting a party’s liability in case of an emergency situation or the event of force majeure will have no effect.

The party who has breached the relevant obligation will have to prove that the breach was caused by the pandemic.

The Supreme Court’s decision has provided useful clarity and guidance to the Saudi courts when considering claims arising out of contractual breaches due to the pandemic. However, courts still have a significant amount of discretion when considering issues, such as how to determine what is an “unusual loss”, how long a temporary effect may last for, and what the relevant business activity that needs to be taken into account is.

As a result, every situation will need to be considered on a case-by-case basis in order to determine the extent to which the principles laid out by the Supreme Court will apply.
Navigating through construction disputes in India

Where large projects exist, disputes will often arise. The Indian construction sector is no exception, but the lack of a standard form contract and the option of several forms of dispute resolution means that resolving disputes can be complex.
Construction is a major sector in India—indeed, it is the country’s second-largest industry after agriculture. It is also the second-largest employer and the second-largest recipient of foreign direct investment, making up 9 percent of India’s GDP. Forecasts predict that India will become the third-largest construction market globally by 2025.

Currently, standard form contracts are not widely used for Indian construction projects. The FIDIC, ICE, NEC, JCT and ACA forms are sometimes used and government authorities, such as the National Highways Authority of India (NHAI), use their own bespoke contract form that reflects their requirements, particularly for public-private partnerships.

Resolving construction disputes in India

Construction disputes in India can be—and in practice are—resolved by the full spectrum of dispute resolution methods, although arbitration is generally the preferred route.

In construction disputes, it is quite common for parties to refer their disagreement for adjudication by a dispute board first, although the decision of the dispute board is generally not binding. Consequently, subject to any contractual requirements, a party dissatisfied with a dispute board’s decision may refer the matter to arbitration.

The Arbitration and Conciliation Act 1996, which was amended in 2015, 2019 and 2020, governs arbitrations seated in India and provides the framework for the enforcement of foreign arbitral awards. The act covers both domestic arbitration and international commercial arbitration involving at least one foreign party, and deals with matters such as the appointment of arbitrators, interim relief and set-aside proceedings.

Arbitrations involving Indian parties tend to be seated in India, while arbitrations involving at least one foreign party tend to be seated outside India.

Foreign investors generally prefer institutional arbitration using rules like those of the International Chamber of Commerce, London Court of International Arbitration or the Singapore International Arbitration Centre (SIAC).

In contrast, Indian parties have traditionally preferred ad hoc arbitration involving retired High Court or Supreme Court judges serving as arbitrators. However, to promote institutional arbitration in India, the

Foreign investors generally prefer institutional arbitration; in contrast, Indian parties have traditionally preferred ad hoc arbitration involving retired High Court or Supreme Court judges serving as arbitrators
The Indian construction disputes environment remains a patchwork, but there is steady progress toward a system that provides better outcomes for users.

Mumbai Centre for International Arbitration (MCIA) was established in 2016. Since then, its caseload has grown steadily year on year. Indian parties are also increasingly turning to SIAC to resolve disputes—almost two-thirds of the record 1,080 cases filed with SIAC in 2020 involved an Indian party. The Arbitration and Conciliation Act 1996 also provides a framework for settling disputes through conciliation. If a settlement is reached through conciliation, it can be recorded in the form of an arbitral award and is enforceable in court. Historically, conciliation has not been used often in practice. However, recent trends indicate that the appetite for conciliation for resolving construction disputes has increased, particularly for road construction disputes involving public-private partnerships.

Mediation in India falls into two categories: judicial and private. For construction disputes, judicial mediation is rare because usually one of the litigants is a state entity and courts are hesitant to get involved. Private mediation is also rare, and generally used only for low-value disputes.

In August 2019, India signed the Singapore Mediation Convention, which aims to facilitate the enforcement of mediated settlement agreements and may well lead to an increase in the use of mediation. When it comes to litigation before the courts, the hierarchy of civil courts in India is broadly divided into local civil courts, regional High Courts and the Supreme Court of India. Notably, India does not have a specialist construction court along the lines of the English Technology and Construction Court. Instead, the Commercial Courts Act 2015 enables state governments either to constitute commercial courts at the district level or designate a commercial division within existing High Courts to deal with construction disputes. The High Courts of Delhi and Mumbai have each set up a commercial court, as have several state governments.

India has also sought to establish “Special Courts” to deal with civil proceedings related to specific performance of construction contracts, sitting below the High Court within the court hierarchy. Their jurisdiction extends to all infrastructure projects within local territorial limits. So far, these Special Courts have been established in the states of Uttar Pradesh, Karnataka and Madhya Pradesh.

Forecasts predict that India will become the third-largest construction market globally by 2025.

Foreign investors may be reluctant to agree to resolve disputes through litigation, due to the possibility of having to engage with an unfamiliar judicial process. They also often have concerns about the independence, impartiality and efficiency of the Indian court system.

Trends in Indian construction

A recent notable event in road construction was the issuance of a memorandum by the Ministry of Road Transport and Highways categorizing COVID-19 as a force majeure event for road construction contracts. The ministry announced reliefs for road construction contractors, including extensions of time, certain direct payments to subcontractors and relief from liquidated damages.

Separately, recent amendments to the Specific Relief Act 1963 prohibit Indian courts from granting injunctive relief in civil proceedings for specific performance of infrastructure projects, where that injunctive relief would impede or delay the progress or completion of the project. This covers roads, bridges, shipyards, airports, public transport, water and sanitation, and other social and commercial infrastructure.

Meanwhile the National Highways Authority of India, the government agency that tenders public road construction projects, has set up a Conciliation Committee of Independent Experts (CCIE) to settle long-standing road construction disputes that have been mired in litigation or arbitration for several years. Conciliation before the CCIE is consensual and, if it fails, then the parties are free to pursue arbitration or litigation.

The Indian construction disputes environment remains a patchwork, but there is steady progress toward a system that provides better outcomes for users.