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The International Comparative Legal Guide to: **Project Finance 2019**

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A practical cross-border insight into project finance

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Current Trends in LNG Development and Construction

Julia A. Czarniak



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Skadden, Arps, Slate, Meagher & Flom LLP

I. LNG Project Development: A Brief History

For multiple decades now, LNG export projects developed and constructed around the world have consistently appealed to lenders involved in project financings. In many respects, LNG export projects are perfectly suited to what we think of as a “classic” project financing: their development and construction phases are capital-intensive; and they recoup their high development and construction costs by attracting creditworthy offtakers, including large oil and gas conglomerates, to purchase LNG pursuant to long-term sale and purchase agreements. Though LNG projects and related project financings follow different structures – from fully integrated to tolling and trustee borrowing structures, some of which will be discussed in more detail below – these features of LNG development and construction are present in virtually every major LNG export project.¹

That said, LNG export projects that are brought to the project finance markets as of early 2019 have evolved significantly in structure and risk allocation from their counterpart projects that were first funded through traditional project finance methods, beginning more than 20 years ago. For example, in December 1996, Ras Laffan Liquefied Natural Gas Co. (RasGas), which in broad strokes comprises an incorporated joint venture between Qatar Petroleum and Exxon Mobil Corporation, raised an initial \$2.55 billion of debt financing from export credit agencies (ECAs) – more on them later – and in the capital markets to fund the first two liquefaction trains at RasGas’ project in Qatar.² At the time of the initial RasGas financing, the ECAs, the rating agencies and bond investors were evaluating what is known in the LNG industry as a “fully integrated” project, by which we mean that the relevant project company who owns the LNG production trains also has an ownership stake in all other components of the project, such as hydrocarbon extraction and delivery of hydrocarbons to the project site. In addition to its direct ownership of the project’s liquefaction trains themselves, for example, RasGas received a concession from the Qatari government to drill for, produce and sell natural gas from certain formations of Qatar’s voluminous natural gas fields.³ In addition to the upstream assets and liquefaction and storage facilities comprising the RasGas LNG project, for the purposes of providing financing to the project, the lenders diligenced not only offtake agreements but also the shipping arrangements and port facilities on both the loading and receiving side. From this starting point, RasGas and its affiliates began a years-long period of securing several rounds of financing and refinancing, with additional trains receiving their initial stage project financing up through 2009.⁴ Project financing terms with each succeeding

financing reflected successful execution by Qatar Petroleum and its partners of the earlier projects.

There are upsides and downsides to this integrated structure employed by projects like RasGas. One major upside from the financiers’ perspective is the integrated project’s ability to benefit from strong sponsor support – in RasGas’ case, completion support from the sponsors as well as the implied ongoing support of the Qatari government. Given the upstream component of any integrated project, such projects require significant equity investment of the kind that only large multinationals and state-owned sponsors have the financial wherewithal and industry experience to provide. At the same time, such projects can achieve higher leverage ratios, with third-party financing covering more than the total cost of the liquefaction components of the project alone as the lenders are able to include the upstream assets in the overall project’s value. On the downside, however, the lenders need to get comfortable with the upstream risk (e.g., the quality of reserves as well as the project parties’ ability to safely drill, extract and deliver hydrocarbons to the LNG plant). In addition, from the lenders’ standpoint, the interconnectedness of components of an integrated project creates a potential domino effect where underperformance in one area of the project’s value chain cannot be separated from another (e.g., in an integrated project which involves extraction of field and gas condensate, there is an additional considerations relating to sufficiency of condensate storage and lifting, since reaching storage capacity for condensate could lead to curtailment in LNG production) and lenders need to identify, mitigate and, where a risk cannot be completely mitigated, properly allocate such risks among the various project participants.

Now that the US has become a major exporter of natural gas (following recent discoveries of natural gas wells and the use of fracking as a means of extraction), US LNG export projects have benefited from abundant gas supply and the market’s corresponding view that US LNG export projects have minimal gas supply or other upstream risks compared to their international counterparts. Thus, US LNG export projects that have reached financing stages or have been successfully project financed have a much more disaggregated structure than early-stage LNG financings like RasGas. This trend is only continuing to accelerate, especially in the US, as we write in the first half of 2019. In the disaggregated structure, broadly speaking, the project company seeking financing will usually only own the liquefaction trains themselves and necessary ancillary equipment and, in some (but not all) cases, export terminals and berths and storage tanks. Under this framework, gas will be supplied by third-party vendors and LNG will be purchased by third-party offtakers, ideally with title to the gas being transferred at the project company-owned LNG facility. An affiliate of the project

company often will own a lateral pipeline that connects the export project to nearby interstate gas pipelines, but this affiliate will be distinct from the special-purpose project company and lenders may sometimes require that these pipeline affiliates be included in the project financing for the purposes of the collateral and covenant packages.

Projects and sponsors are exploring and adopting different approaches in an effort to minimise project costs. While LNG export project structures have evolved in recent years, the market for LNG has been particularly robust, and there has been fierce competition among project companies to enter into sale and purchase agreements with creditworthy offtakers, which has pushed sponsors to reduce construction costs so that they can offer more competitive terms to their customers. In response, in the US, we have seen a trend towards modular fabrication and construction, whereby the liquefaction train equipment and materials are largely manufactured offsite. In theory, modular fabrication should minimise time spent on construction work on the ground, in that the principal construction contractor on-site should only have to install the equipment once it arrives. However, even though project sponsors have begun to realise certain efficiencies in developing and constructing LNG projects, including through modular construction and planned expansion of those projects in multiple phases, the possibility for tension between sponsors and capital providers nevertheless exists and perhaps is augmented by such a disaggregated approach. For example, it remains to be seen how the lenders price this risk in light of the construction delays some US LNG projects have experienced, with Cheniere's projects having been an exception. Internationally, we have seen sponsors develop "megatrains" that are capable of producing close to 8 MTPA of LNG on their own. Megatrains were initially implemented and financed as part of the Qatargas II project, where Trains 4 and 5 have nameplate capacity of 7.8 MTPA of LNG.

This chapter will discuss in more detail trends in financings of LNG export projects, with a focus on those located in the US. In part II of this chapter, we will examine how project sponsors and developers are frequently turning to new sources of financing, including private equity and mezzanine lenders who support less-experienced sponsors and help satisfy a project's capital requirements, and how the roles of "more traditional" project finance lenders (like ECAs and bondholders) have adapted to account for the LNG industry's evolution. Part III of this chapter will analyse new trends in allocation of construction risk and mitigation, with sponsors offering alternative solutions to the traditional engineering, procurement and construction (EPC) framework to achieve cost savings. Finally, part IV of this chapter will touch on regulatory considerations, which are attracting more and more attention from the lenders given challenges to some of the LNG projects.

II. Sources of Financing

A. Mezzanine Financing and Private Equity Investment

A "traditional" project financing of an LNG export project – to the extent such a thing as a "traditional" project financing exists – typically calls for a debt-to-equity ratio of no more than 70:30 so that the project's contracted revenues and repayment schedule aligns with overall economic expectations. In other words, the amount of project finance debt incurred by the project company is usually capped at around seventy per cent (70%) of the overall project's costs, with the remaining thirty per cent (30%) of project costs supplied by equity contributions. The higher the portion of project costs funded with

equity, the better the debt service coverage ratio (i.e., the less exposure lenders will have in recouping their costs). In addition, lenders take additional comfort from a larger amount of "at risk" equity capital provided by the sponsors; in other words, the more "skin in the game" sponsors have by investing equity in their projects, the greater their incentives to see the project through to completion. Throughout most of the history of LNG export project financings, equity to cover the minimum thirty per cent (30%) of project costs was provided by sponsors, who were more often than not large oil and gas conglomerates, sovereign-owned oil and gas companies or a combination of the two. Most of these companies did not have a need for third-party equity funding, which is more expensive to obtain than senior debt, and satisfied the equity portion of capital costs by funding the upstream part of the development. Lenders were able to rely on those sponsors' credit and operational histories and knew that such sponsors had the know-how and liquidity to back up their economic incentives to see their projects succeed.

As mentioned above, because the US has only very recently and very quickly become a major exporter of LNG, sponsors of the first wave of US LNG projects have not yet had the opportunity to establish a credit history or track record that can compare to multinational oil and gas companies with internal funding sources. With this in mind and the fact that project finance lenders will not extend senior debt in excess of seventy to eighty per cent (70–80%) of the project costs, the ability of new sponsors in the US to secure private equity or mezzanine debt financing is practically imperative to ensure sufficiency of funds for the development of the project.

The contours of the mezzanine debt or private equity investments that these new sponsors seek can range from the relatively straightforward to the more complex combinations of preferred equity and back-leverage on such preferred equity. In a standard mezzanine debt, for example, an institutional investor may provide high-yield debt that is structurally and/or contractually subordinated to the senior project-level debt. Private equity firms may take an ownership stake in the sponsor or in the project company itself, often negotiating a preferred stake that entitles them to certain voting rights and preferential distributions. The private equity investors will look to protect the value of their investment through requiring approval over such major decisions as, among others, (i) amendments to or terminations of material project documents, (ii) the entry into new material project documents, (iii) the approval of any project expansions (to build additional LNG trains, for example), (iv) the incurrence of additional material debt, or (v) the issuance of additional equity. Private equity investment directly into the project company itself presents an interesting wrinkle for the lenders to the project company, since the lenders will need to be assured that the project company's organisational and governance documents sufficiently limit the private equity investor's interference in operational and technical matters of the project. These tensions are mitigated by third-party equity investment into a holdco one level above the project company, which puts the details of these arrangements largely outside of the scope of project lenders review, subject solely to the change in control provisions. Having equity invested at the level above the project company exposes equity investors to additional risks for which they expect to be compensated in their returns. The markets have accepted these risks and we have seen structures where even minority equity investments into the project company can be financed, as long as the lenders have sufficient comfort on the approval rights mentioned above in addition to the project economics. The main advantage of mezzanine financing and why we think this trend will remain very strong in 2019 is the ability to sculpt to the needs and payment profile of a particular project. Availability of this third-party equity

and its flexibility is becoming more important with the need to provide a substantial cushion to cover any potential cost overrun risk (as will be discussed below in part III) and, given preferred but capped returns to these equity investors, sponsors should still prefer it to dilution of sponsor equity, especially for a contingent risk.

B. ECAs

ECAs are generally governmental or quasi-governmental entities that support the export of their host countries' manufactures and industrial production. ECAs have been around for practically a century: many were founded in the wake of World War I to revive host countries' exports and trading capacity that had been decimated or at least severely constrained during and after that conflict, which was sustained through the later economic downturn of the late 1920s and 1930s.⁵

For as long as there have been LNG export projects seeking access to the project finance markets, ECAs have invested in those projects, typically providing their own tranche of debt that shares *pari passu* in the project company's collateral package alongside the other senior lenders. In addition (or sometimes as an alternative) to direct lending, ECAs' participation can take the form of indirect credit support (known as ECA "coverage" or an "ECA-covered facility"), such as a loan guarantee or insurance. A further advantage of using ECAs as a financing source, especially as compared to a wide-reaching capital markets offering, is that sponsors only need to interface with a relatively small and bespoke group of ECAs, lessening the worries of sponsors who are sensitive to disclosing the terms of their offtake agreements or who would prefer not to endure the procedural hurdles involved in obtaining a waiver or consent from a large group of debt holders.

In many ways, the ECAs' interest in LNG projects should be no surprise, owing to the capital-intensive nature of the projects and sponsors' and construction contractors' need to procure highly specialised equipment and materials from around the world to incorporate into their projects, and because many LNG projects have been first-of-their-kind in emerging markets and political insurance and government-to-government financing provided important political support and coverage. ECAs who are repeat participants in LNG projects financings include, among several others: the Japanese Bank for International Cooperation (JBIC), whose representative financings include the Cameron and Freeport export projects (US); the Export-Import Bank of Korea (KEXIM), whose recent representative financings include the Coral South floating LNG project (Mozambique); U.S. Eximbank, which until 2016 has participated in a number of international LNG projects; and *Compagnie Francaise d'Assurance pour le Commerce Exterieur* (COFACE), whose representative financings include the Coral South floating LNG project (Mozambique) and the Yamal project (Russia). As can be seen from the list above, while ECA involvement in LNG facilities is commonly associated with international projects, ECAs have recently become active in financings of US LNG export projects like Freeport and Cameron, as well as rumoured participation in Jordan Cove LNG.

While they may not be needed for political coverage or currency convertibility, ECAs can play an important role in the US LNG export projects. Given Basel III constraints, commercial banks are not in a position to provide maturities beyond seven years; thus, any project using commercial loans is (implicitly or explicitly) planning a bond take-out or other refinancing at the end of the construction period. In the current interest rate environment this introduces a certain level of uncertainty which may have implications for returns to equity (given that any interest rate increase could not be

compensated through the price of LNG). While ECA financing requires heavy upfront diligence and involvement of the ECAs and their advisors, such financing is typically long term and can be obtained on quite competitive terms. We are also hopeful that if U.S. Eximbank is reauthorised and has its board approved in 2019, it can play a role possibly even in domestic LNG projects, since they would be eligible export projects.

C. Intercreditor Issues

As alluded to above, because of the number of different financing parties that often lend to LNG projects and the diversity of the overall capital stack, special care needs to be taken to anticipate and address issues that may arise among the various creditor groups. Not unexpectedly, ECAs, project bondholders and commercial bank lenders, all of whom are common sources of LNG project debt financing, will sometimes have competing priorities. One common area where the credit groups' incentives may not align can involve the covenant package – to take just one example, banks may be more sensitive than bondholders to compliance with certain environmental requirements, owing to more stringent internal requirements and standards, and can require that the financing documents' amendment procedure require bank approval before modifying one of these "fundamental" provisions. The terms of the bonds would typically provide that, except for amendments to the economic terms of the bonds, no vote of the bondholders is required as long as sufficient vote of other lender groups is secured (despite the fact that with different maturities, the interest of commercial banks and the bondholders may not always align). Where ECAs are involved, intercreditor issues can be even trickier, depending on the ECAs' individual policy-specific rationales as well as the need to be treated equally with each other ECAs. Additionally, as a general matter, sponsors should expect banks and ECAs to be more active in loan administration than bondholders. The ECAs' policy-derived investment strategies commonly manifest themselves in the form of certain "golden" votes that allow them to veto lenders' or bondholders' decisions.

Consequently, any intercreditor arrangement with respect to an LNG project financing needs to provide for an efficient procedure for approving amendments and waivers to the main financing documents. Note also that mezzanine lenders, to the extent that are not party to the senior intercreditor arrangement, may require their own intercreditor arrangement depending on how the debt is structured.

III. Construction Risks and Considerations

As mentioned in part I, an LNG project sponsor's ability to provide completion support has traditionally been a prerequisite for any LNG project financing. However, the history of US LNG export projects shows that a given project's construction contracts can determine whether that project is financeable. Some of the initial project-financed LNG projects in the US negotiated a fixed-price, turnkey EPC contract with a creditworthy contractor, but the need to reduce construction costs to make LNG export projects more competitive has produced a disaggregated contractual structure that can lead to new construction-related risks.

A. Completion Support

In a traditional LNG project financing, lenders to LNG projects frequently look for sponsors to provide some form of completion

support or guarantee to mitigate construction delays and underproduction or other underperformance of the facility. Because of the capital-intensive nature of LNG projects, lenders understandably would like as much assurance as possible that the sponsors will see a project through to completion, as the completed project is the only source of debt repayment. To refer back to our discussions in parts I and II, LNG project sponsors have historically been able to provide creditworthy completion support, often in addition to the fixed price turnkey EPC contracts, technical expertise and equity commitments to cover delays and cost overruns.

Completion support of the type traditionally required by lenders in international financings is not possible with entrepreneurial sponsors who have up to now led the development of US LNG export projects, which have limited credit history and are often thinly capitalised. None of the financings of US LNG export projects to date have included full guarantees of construction debt in the event that project completion does not occur by a specific date that is negotiated in the relevant credit facility. The first successful US LNG export project financing by Cheniere mitigated this risk by entering into a fixed-price, turnkey EPC contract with Bechtel, a contractor with high credit and extensive experience in the LNG space. As will be discussed in more detail in sub-part B below, given the absence of completion guarantees from US export projects and the pressure to avoid a contractor's premium,⁶ sponsors are looking for alternative solutions to allocate construction risk in LNG projects being brought to project finance market.

B. Revisiting the Traditional "Lump-sum, Turnkey" EPC Contract; Construction Delays in the "Disaggregated" Contractual Framework

Developers in the US are moving away from what has long been viewed as the market expectation for project finance: a single lump-sum, turnkey EPC contract with one primary construction contractor who guarantees, or "wraps", the design, engineering, procurement, construction and testing of the entire project for a fixed price (subject to customary change orders). The reasons for this, we believe, are two-fold: with quite significant downward pressure on project costs, contractors are reluctant to take the risk of wrapping a facility's design and construction without appropriate compensation;⁷ and the sponsors believe that they are as well-positioned to manage construction risk through a combination of other solutions.

Due to the increased use of modular fabrication of liquefaction trains, contractors and sponsors alike have warmed to a framework of having a manufacturer provide and guarantee performance of the liquefaction trains and have the contractors first install the liquefaction trains delivered by the manufacturer and complete the construction of the balance of the export facility. On one hand, the contractors benefit from no longer having to guarantee the performance of equipment with which they have limited technical knowledge: the fabrication of modular liquefaction systems for use in large-scale financeable projects is still limited to a relative few players, like GE and Siemens. On the other hand, savvy sponsors should realise certain cost savings: the balance-of-plant construction contractor will charge a lower premium for the performance of its work since it does not have to take the risk of the liquefaction systems underperforming, and the manufacturer of the liquefaction system should also charge a lower premium than the main contractor would have, since it should be assured of its technology and can perform corrective work much more easily. Some of these cost savings can then be passed onto the offtakers and make the project more competitive and attractive. The project companies

further benefit from performance guarantees under two contracts, the EPC contract with the main contractor and another with the units' manufacturer, though this necessarily presents an administrative burden to the project company as there are multiple guarantees and liquidated damages regimes to enforce.

A new challenge is presented by having the project companies directly contract with an additional contractor, however: the project company must find a way to properly allocate testing and installation oversight responsibilities. One way to mitigate the difficulty of making this allocation, and the related possibility that the contractor and the liquefaction system supplier blame the other if a performance tests demonstrates inadequate production levels, is to establish a contractual dispute resolution mechanism to which each of the project company, main contractor and liquefaction system supplier agree. Special care also needs to be taken to ensure that the main contractor and liquefaction system supplier do not step on each other's toes while on-site, in which case it is prudent to charge the main contractor with oversight abilities so that all personnel are properly situated.

In concept, one would expect that the trend towards modular fabrication of the liquefaction equipment to shorten a representative LNG export project's overall construction schedule. This is true – because the main equipment, the liquefaction trains and in some cases the power generation facilities, is fabricated offsite, the balance-of-plant contractor has the room and the time to perform site preparation and begin building ancillary facilities on-site without being physically impeded by the process of manufacturing such equipment. However, in reality, the Freeport and Elba Island LNG projects in the US are both experiencing construction delays – and a shorter schedule also makes any delays more pronounced. For example, if liquefaction trains, which will usually arrive in the latter part of the construction period (assuming a disaggregated project structure utilising modular construction) after the balance-of-plant contractor has performed much of its preparation work, are delayed, that could result in a delay period where the balance-of-plant contractor is effectively sitting idle at the project site waiting for something to install. Sponsors thus need to build in a sufficient cushion in their offtake agreements to ensure that the guaranteed dates by which they need to start making LNG deliveries available for purchase fall well after the initially scheduled project substantial completion date.

From the financing standpoint, lenders prefer a single point of responsibility for construction. If anything goes wrong with a project subject to a bifurcated EPC contract structure, in addition to any dispute with the balance-of-plant contractor, a dispute on allocation of responsibility between the contractor and an equipment supplier is almost assured. Lenders traditionally prefer to pay a turnkey premium to avoid this as they do not directly benefit from the savings resulting from the bifurcated approach, except to the extent that sponsors are able to meaningfully reduce their exposure. Acceptability of this disaggregated approach may be very project-specific based on the strength and experience of the sponsor management team, sufficient equity cushion to cover delays and cost of any dispute, adequate carve-outs from the contractors' and suppliers' limit of liability (to incentivise contractors and suppliers to achieve necessary production levels without paying down liquidated damages), and a sufficient cushion in the construction schedule before the LNG offtakers have termination rights, if any.

C. Labour Considerations

Labour considerations represent a component of construction risk which should be assessed and which we believe are likely to be

prominent for the second phase US LNG financings. Large-scale, capital-intensive project development will have significant impacts on local labour markets in the areas where LNG projects are built. Developers and contractors will need to have sufficient access to both craft and non-craft labourers when designing, engineering, constructing and overseeing any project. However, the coastal regions where LNG export projects are built may be particularly difficult to access – think of shipping channels in the Mississippi Delta in Louisiana, for instance – and contractors may have challenges in recruiting labourers to come work at a given project, which will still take years to complete even if construction schedules are improving, if the region where a project is located has deficient labour supply. Thus, depending on location, ease of access, length of the construction period and other factors, contractors will likely need to factor in a premium for labour costs as part of their contract price. Additionally, contractors will have to factor in any difficulty in securing and recruiting workers to the project site into their overall schedules, since any delay in recruitment could affect the critical path of the entire project's construction and lead to increases in cost. According to the construction industry executives, tighter restrictions on immigration in the US are also affecting availability of skilled labour. Note also that material project contracts will often specify that strikes or other labour disturbances that are not limited to the specific contractor or job site entitle contractors to *force majeure* relief, presenting another obstacle to achieving the original project schedule.

D. Geographic Considerations

As mentioned above in sub-part C, because LNG export projects are usually located in coastal areas or other well-travelled shipping channels – again, think of the Gulf Coast in Texas and Louisiana, which is frequently targeted by hurricanes – they are particularly susceptible to major weather occurrences, floods and other casualty events. As a result, developers and their lenders and investors must adequately ensure the project site is sufficiently protected against *force majeure* and casualty events of this magnitude. Sponsors and their lenders and investors should engage environmental and insurance consultants as appropriate to evaluate how the project has mitigated these risks. But even with adequate insurance, hurricanes Ike and Harvey have resulted in construction delays on many industrial projects along the Gulf Coast due to demands on labour and materials in, as well as delays in shipment of materials and equipment to, the affected areas.

IV. Recent Regulatory Developments

Regulatory considerations are always present in any LNG project financing, though to varying extents based on the applicable project's location. Projects located in developing economies, in particular, need to be evaluated for geopolitical risks, like expropriation and currency risk – a project may receive revenues in local currencies, or there may be host country requirements that debt be denominated in a certain currency, requiring an adequate hedging programme to counter foreign exchange fluctuations – that are common to cross-border project finance transactions. LNG projects must work with regulatory regimes governing the transport and sale of gas or other commodities in their host countries. In some respects, in the LNG space, many of these aforementioned concerns are mitigated by the already high level of host government involvement in the development of LNG exports. Think of a Qatari-sponsored LNG project or a financing involving ECAs – these projects will address many of the geopolitical and regulatory

concerns because the project must align with the policy preferences and trade objectives of the sponsor's and ECAs' host countries.

Though US LNG projects traditionally carry much less regulatory uncertainty when compared to international projects, owing mainly to the US's relative governmental stability over time and the relative absence of the geopolitical risks discussed above, LNG projects in the US remain subject to challenges posed by non-governmental organisations (NGOs) and local opposition under the current regulatory environment. Historically, NGOs have challenged required approvals for US LNG export projects issued by the Federal Energy Regulatory Commission (FERC) and US Department of Energy (DOE), including export licences, on climate-change grounds. These efforts have largely been unsuccessful, as US agencies cannot rely on effects outside the US as a reason to deny approvals.

Indications are that NGOs (such as the Sierra Club) are re-evaluating their approach, however. One new approach NGOs have adopted is to coordinate local interests in opposition to LNG projects, with a focus on halting development of specific portions of a project (like the gas supply pipeline) to stymie the construction progress of the entire facility. This strategy involves challenging certain permitting activities on the basis of local impacts and landowner rights in addition to the broader environmental justice strategy. Unsurprisingly, this approach has a longer time horizon than simply challenging the major FERC and DOE approval milestones. To date, local opposition to US LNG projects has found limited success (e.g., the Jordan Cove project in Oregon), but less so in the Gulf region.

V. Conclusion

US LNG projects have significant need for development capital and for new sponsors without very substantial internal funds, project financing remains the best-suited vehicle for raising development debt. In the US, to supplement "traditional" project finance sources, mezzanine debt and preferred equity are also increasingly available to these projects. That said, the recent trend away from lump-sum, turnkey EPC contracts presents new challenges to both the senior and mezzanine lenders and requires careful evaluation, mitigation and allocation of construction risk. Regulatory and permitting trends need to be carefully monitored. Lenders, investors and sponsors need to be aware of and sufficiently address each of these new, relatively idiosyncratic aspects within the wider context of the entire project and typical expectations for financing.

Endnotes

1. This chapter will not discuss LNG-to-power projects but rather will focus on the liquefaction part of each LNG project.
2. "The Evolution of Ras Laffan Liquefied Natural Gas Co. LTD. (RasGas)", by Neil B. Kelly, Managing Director, Ras Laffan Liquefied Natural Gas Co. Ltd., *Twelfth International Conference & Exhibition on Liquefied Natural Gas*, Perth, Australia, May 4–7, 1998.
3. *Ibid.*
4. *Ibid.*
5. "The Role and Importance of Export Credit Agencies", by Raquel Mazal Krauss, *The George Washington University Institute of Brazilian Business and Public Management Issues*, Fall 2011.
6. By way of background, in the IPP space the turnkey premium is estimated to be ten to fifteen per cent (10–15%) of project costs.

7. McDermott International (a successor to CB&I), a contractor on Cameron LNG, took a write-down because of the extra costs related to the construction. It was reported that as a result, McDermott backed away from signing the EPC contract to build NextDecade's Rio Grande LNG terminal in Brownsville, Texas.

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