

MANAGING WITHOUT BUILDING: THE RISE AND REALITY OF EPCM CONTRACTS

Abdusamadov Khojiakbar Khasan ugli

Pennsylvania State University

Annotation: *This article offers a comprehensive examination of Engineering, Procurement, and Construction Management (EPCM) contracts, addressing a notable gap in construction industry literature. The authors trace the gradual market shift away from traditional lump sum EPC contracts toward alternative procurement models, driven by the growing scale and complexity of international infrastructure projects and the strengthened bargaining power of major contractors. The article systematically breaks down the structure, legal implications, and risk allocation of EPCM arrangements — covering key areas including design responsibilities, procurement strategy, construction management, cost control obligations, insurance requirements, net contribution clauses, and dispute resolution frameworks. A central theme throughout is the critical distinction between the EPCM contractor's role as a professional services manager versus the EPC contractor's single-point responsibility model. The authors argue that owners entering EPCM arrangements must maintain capable in-house teams and carefully structured contracts to protect their legal and financial interests across multiple simultaneous contractor relationships.*

Keywords: *EPCM contract · EPC contract · construction management · risk allocation · procurement strategy · turnkey contract · lump sum contract · project financing · FIDIC · front-end engineering design (FEED) · trade contractors · professional indemnity insurance · net contribution clause · dispute resolution · cost control · single point of responsibility · large-scale infrastructure · petrochemical projects · contractor liability · construction law*

Introduction

For a long time, the preferred approach for owners looking to deliver a large construction project — especially one funded through project financing — has been the fixed-price, all-inclusive turnkey model, commonly known as an Engineering, Procurement and Construction contract, or EPC contract. This approach gives both lenders and owners the level of certainty they need when it comes to costs and timelines.

Given how widely used this model became, industry bodies like FIDIC responded by creating standard contract templates that better reflected real market conditions. One example is the introduction of the Conditions of Contract for EPC/Turnkey Projects, known as the Silver Book . Other organizations, including Orgalime, ICC, ENAA, ICE, and ECC, developed similar standard forms. More recently, FIDIC also responded to the needs of major development banks by launching the MDB Harmonised Contract, which incorporates specific changes agreed upon with multilateral funding agencies to FIDIC's Red Book .

That said, while the lump sum EPC contract generally remains the top choice for owners and funders, shifting market conditions have pushed EPC contractors to offer — and sometimes insist on — alternative arrangements. In recent years, cost-reimbursable contracts have grown in popularity, typically featuring a target-price mechanism that shares both savings and overruns between the parties. Even more recently, the EPCM procurement model has seen a notable rise in use across international infrastructure and large-scale construction projects. While this approach has long been common in the mining industry, it has steadily expanded into other sectors, particularly petrochemicals, power generation, and desalination.

The authors have observed that many people working in the construction industry still do not fully understand what EPCM means or how it differs from EPC. A common source of confusion is the letter "C" in EPCM. Although it stands for "Construction," it refers specifically to Construction Management — not physical building work. Under the EPCM model, the contractor does not carry out any actual construction. Instead, they develop the design and oversee the construction process on behalf of the owner. This confusion is further compounded by the fact that no recognized standard contract form exists for EPCM procurement. It would be a welcome development if organizations like FIDIC and ECC were to consider creating one.

This gradual move away from the lump sum turnkey model likely reflects the stronger bargaining power that many EPC contractors now hold in the current market, as well as the growing scale and complexity of projects being tendered internationally. In the petrochemical sector, for instance, there are simply not enough contractors with the necessary expertise and financial capacity to take on the major capital projects emerging — particularly in the Middle East. With so few large EPC contractors capable of delivering such projects, funders have been forced to consider alternative procurement routes and accept higher levels of risk, especially as lump sum EPC prices have risen. Financing a major project through a contractor with no proven track record is rarely a practical or appealing option.

As a result, leading EPC contractors have found themselves in a significantly stronger negotiating position. This has arguably led to a market correction — with profit margins for EPC contractors improving — and a shift of risk back toward project sponsors and lenders, moving the industry away from the lump sum turnkey approach. In some sectors, such as petrochemicals and mining, securing a lump sum contract with a single EPC contractor may now be the exception rather than the rule.

With this market context in mind, the authors aim to explain how a typical EPCM contract works and to highlight its key differences from an EPC contract. Despite sounding similar, many construction professionals are still unable to clearly explain the distinction between the two. In fact, during their research for this article, the authors could not find a single written piece dedicated to explaining EPCM contracts. A simple internet search returns lists of EPCM contracts and contractors, but almost nothing that explains what an EPCM contract actually is.

To put it simply: an EPC contract is a design-and-build arrangement in which a single contractor takes full responsibility for all aspects of engineering, procurement, and construction. An EPCM contract, by contrast, is a professional services agreement with a fundamentally different allocation of risk and distinct legal implications. The critical distinction is that under an EPCM contract, the actual construction is carried out by other parties — the EPCM contractor is a manager, not a builder.

Engineering, Procurement, Construction Management (EPCM)

At its core, an EPCM contract is best understood as a professional services agreement. In terms of how the procurement is structured, it shares some similarities with a traditional construction management approach — but with one important distinction: the detailed engineering and design work is carried out by the EPCM contractor itself.

In a typical EPCM arrangement, the contractor is responsible for three main areas:

- Design — this covers both the early-stage basic engineering or Front-End Engineering Design (FEED) and the development of the full detailed design;
- Procurement — sourcing and purchasing the required materials and equipment;
- Construction contract management — overseeing and administering the various construction contracts on the owner's behalf.

One of the most significant differences between the EPCM and EPC models is the legal role the contractor plays. Under the EPCM model, the contractor provides professional services, including design, but is not a direct party to any construction contract. Instead, the EPCM contractor acts as the owner's agent, creating direct contractual relationships between the owner and the various suppliers and trade contractors. In other words, each trade contract is a direct agreement between the owner and the relevant trade contractor, specialist service provider, or supplier — not with the EPCM contractor.

For this type of arrangement to work effectively, the owner ideally needs a strong and experienced in-house team to work alongside the EPCM contractor in managing and administering these contracts. While contract management is a core part of what the EPCM contractor is engaged and paid to do, the division of responsibilities across multiple parties in an EPCM setup means the owner must actively monitor the performance of each party — and for good reason, as explained below.

Any problems that arise under the trade contracts — such as clashes between different contractors' scopes of work, delays, disruption, damage to property or works, or claims for additional time and money — are ultimately the owner's responsibility to resolve. The EPCM contractor is expected to help the owner manage and work through such claims, but since it is not a party to those contracts, it is not directly involved in any dispute that arises between the owner and a trade contractor.

Furthermore, the EPCM contractor does not typically take on responsibility for delivering the completed project by an overall deadline. As a result, EPCM contracts rarely include liquidated damages provisions tied to overall project completion. Similarly, the EPCM contractor does not bear responsibility for the physical care of the works or for the

total final cost of the project to the owner. That said, incentive mechanisms are commonly built into EPCM contracts to encourage good performance in these areas.

Given this structure, the main areas where an EPCM contractor could face legal liability relate to failures or negligence in:

- ☐ Carrying out the design work;
- ☐ Preparing the budget cost estimate;
- ☐ Estimating the overall project duration;
- ☐ Managing the procurement process and administering the trade contracts;
- ☐ Coordinating design and construction activities across the various trade

contractors.

However, establishing a breach of these obligations is rarely simple. In particular, when it comes to cost estimating and scheduling, an owner may find it difficult to prove actual financial loss — even where the EPCM contractor has clearly been negligent.

The contractual relationships in a typical EPCM arrangement can be understood as follows. The owner occupies the central position at the top of the structure and maintains direct contractual links with all key parties involved in delivering the project — namely, specialized process engineers, vendors, and trade contractors. The EPCM contractor, rather than sitting in the chain of command, operates beside the owner in a support and oversight role: advising, managing, and coordinating on the owner's behalf, but without holding any direct contracts with the construction parties. Below the trade contractors sits a further layer consisting of sub-contractors and sub-vendors, who are engaged by the trade contractors to carry out specific elements of the physical work. The key takeaway from this structure is that all contractual and financial responsibility flows directly between the owner and each party — the EPCM contractor manages the process but carries none of that direct contractual exposure.

This stands in clear contrast to the EPC arrangement. Under the EPC model, the owner has only one contract — with the EPC contractor — making it a much simpler, single-point structure. The EPC contractor acts as the central hub, taking on full responsibility and directly engaging all other parties: specialized process engineers, vendors, trade contractors, and site services providers. The owner is therefore shielded from direct dealings with any of the parties actually performing the work, as all risk, liability, and contractual responsibility is funnelled through the single EPC contractor. This simplicity and certainty is precisely what makes the EPC model appealing to owners — but it equally explains why EPC contractors typically charge more and negotiate stronger protections, given the significant burden of risk they assume.

Here is the paraphrased version of the text:

Services Performed Under an EPCM Contract

(a) Engineering and Design

When a project involves a patented process, the process design and commissioning support are typically provided by a specialized supplier through a separate technology and

licensing agreement with the Owner. The owner of that process technology is usually hired to conduct laboratory and other tests, adapting previously proven processes to suit the specific characteristics of a particular natural resource. Managing multiple advanced technologies at once carries considerable risk. The licensing agreement will generally include provisions to upgrade the process over a defined period, ensuring the plant remains competitive. The financial strength and resources of the process design provider should be carefully evaluated to confirm they can sustain their obligations throughout that period. Because the process technology provider owns the intellectual property that the Owner needs, they are often in a strong position to negotiate terms that are highly favorable to themselves.

When a process provider demands broad limitations on their liability — for example, restricting it to simply redoing their own work up to a certain financial cap — the Owner's options in the event of a process failure may be very limited. Essentially, the Owner might only be able to require the provider to fix the design and testing work covered by the license and related service agreements, up to that capped amount. Such liability restrictions can create serious risk exposure for the Owner. Some process failures can be resolved in a relatively straightforward way, such as adding equipment to handle impurities that are degrading the product. However, deeper issues — such as excessive consumption of utilities or fundamental flaws in the process itself — can lead to the complete failure of the entire project, where the plant simply cannot process the raw material to deliver the required output at an acceptable cost.

For this reason, it is essential to ensure that risk is properly assigned to the right party. This typically requires a thorough initial risk assessment, the development of a risk management plan, and careful negotiation of agreements with the process provider and other contractors, with input from insurers. Neither an EPCM nor an EPC contractor will generally be willing to take on responsibility for any aspect of the process design, unless they themselves own that process. This can put the Owner in a difficult position when the plant fails to meet production targets for any reason. Both the EPCM and EPC contractor may argue that such failures stem from flaws in the process design rather than the detailed engineering work — and resolving that dispute can be extremely difficult. This is precisely why it is generally more advantageous for the Owner to pursue a single point of responsibility, where the EPC contractor takes full ownership of all aspects of the detailed design, including the process, wherever possible.

Under the EPCM model, the EPCM contractor is typically responsible for preparing the Front-End Engineering Design (FEED) and carrying out the full detailed engineering in line with standard industry practices and sound engineering principles. This forms the foundation for the work handed over to the construction companies.

In some cases, the EPCM contractor may simply build upon a basic engineering package already provided by the Owner. Regardless of the approach taken, it is critical — from the Owner's standpoint — that the EPCM contractor takes responsibility for ensuring that the finished plant design will meet the required process performance standards. It is therefore

essential that the EPCM contractor works closely with all other parties involved, making sure the engineering and design fully comply with the approved project specifications, procedures, and safety requirements.

As a result, the EPCM contractor typically holds overall responsibility for establishing and maintaining the interfaces between the design and construction teams, vendors, and construction contractors. This is done to the extent necessary to ensure that all work is carried out to the required standard and quality, and within a timeframe that fits the broader project schedule. While the EPCM contractor generally oversees the coordination of both design and construction, it is also common for them to designate a lead contractor among the various trade contractors to take on some responsibility for on-site construction coordination — even though the EPCM contractor will maintain a strong presence on-site through its own construction management team.

(b) Procurement

A central part of the EPCM contractor's role is to guide the Owner on the best strategy for procuring equipment, materials, and construction services, and then to help put that strategy into practice. In most cases, the Owner will already have a general idea of their preferred procurement approach before the EPCM contractor is even brought on board. As discussed earlier, it is important that the EPCM contract is structured in a way that gives the Owner the flexibility to act on their chosen strategy once the FEED has been completed and construction is ready to begin.

If the contract does not transition into an EPC contract at the end of the FEED stage, the EPCM contractor will need to help the Owner divide the work into major packages and award these to various trade contractors. This includes advising on the terms of each package and putting the necessary contracts in place. As with any project, the timing of when these packages are awarded plays a critical role in the project's overall success. Awarding a package too early — before enough information is available to fix a lump sum price — can result in cost-reimbursable arrangements or expose the Owner to large variation claims on lump sum contracts. On the other hand, awarding packages too late risks delaying the entire project schedule.

During the FEED stage, the EPCM contractor will also typically advise the Owner that certain equipment with long manufacturing or delivery lead times must be ordered well in advance — often before trade contractors are appointed and sometimes even before detailed engineering is fully complete. This in itself introduces additional risks that need to be carefully managed.

The EPCM contractor is responsible for preparing thorough tender documents and managing the process of awarding contracts for both the supply of materials and the delivery of construction services by third parties. A well-written EPCM contract should require that, in order to protect the Owner's interests and ensure competitive pricing, a sufficient number of suppliers are invited to submit bids so that at least three fully qualified and credible quotations are received.

The EPCM contractor must then conduct a careful review of all bids received and provide the Owner with a clear recommendation that outlines the technical and commercial strengths and weaknesses of each offer, along with a reasoned proposal for which contract should be awarded. Following the Owner's approval, the EPCM contractor proceeds to prepare the commercial and technical agreements. While the specific terms and conditions of these agreements must be agreed upon with the Owner beforehand, it is generally the EPCM contractor's responsibility to prepare the standard contract documents and ensure they are appropriate for the type of procurement being used.

From the Owner's perspective, the ideal outcome is a series of fixed-price lump sum contracts put in place by the EPCM contractor on the Owner's behalf. These contracts are direct legal agreements between the Owner and each trade contractor. It is essential that the terms of these contracts are properly aligned with one another and that they adequately protect the Owner's interests. During the course of the works, the Owner may face claims that they need to pass on — either to the EPCM contractor or to the trade contractor responsible for the issue. The contracts must therefore be drafted in a way that makes this possible.

When projects run into trouble, one of the most common complaints that Owners raise against EPCM contractors is that they failed to secure competitive bids, lacked transparency during the tender process, or made poor choices in selecting contractors.

(c) Construction Management

The EPCM contractor holds overall responsibility for managing and overseeing all construction activities on the project. This involves directing, supervising, and coordinating the work of all construction contractors to ensure that everything is carried out safely, on schedule, and to the quality standards required by the project.

This responsibility covers several key areas. First, the EPCM contractor must organize and oversee safety management across the entire construction site. Second, it must maintain a comprehensive quality assurance program to ensure that all work meets the required standards. Third, where a third-party contractor delivers defective or substandard work, the EPCM contractor is responsible for gathering and securing evidence of those defects, along with documentation of any consequences that arise from them. Finally, in the event that a trade contractor defaults or delivers poor-quality work, the EPCM contractor must establish a clear record of the facts, supported by thorough documentation, so that the Owner is properly protected against any claims brought by those trade contractors.

In essence, the EPCM contractor acts as the Owner's eyes and ears on the ground, ensuring that all construction work proceeds as planned while also safeguarding the Owner's legal and financial position should problems arise.

Cost Control

The EPCM contractor is typically paid a project fee spread across equal monthly installments over the duration of the project. In addition, they are often reimbursed for actual costs incurred in delivering their services, at rates and prices agreed upon in the contract. To keep these costs in check and give the EPCM contractor a financial incentive to be efficient,

a target price is commonly established. Under this arrangement, if the actual costs come in below the target, the EPCM contractor shares in the savings.

The EPCM contract often includes a schedule setting out the budgeted man-hours for the contractor's team. This is typically broken down across different functions, including project management (covering the project director, project managers, planners, cost engineers, and health, safety and environment engineers), procurement (primarily buyers), construction (construction managers, site supervisors, site planners, and administrative staff), and engineering (engineers across the main disciplines, including civil, piping and instrumentation, controls, electrical, and mechanical).

Since the EPCM contractor does not directly carry out the construction work, both the Owner and project funders will be keen to ensure that the overall project costs are kept under control. This raises an important question: what responsibility does the EPCM contractor actually bear for the final project cost, and how can the Owner maintain effective cost control without the certainty that a fixed lump sum price — as offered under an EPC contract — would provide?

To address this, it is worth noting that when the EPCM contractor is first appointed, the Owner may have very little clarity on what the project will ultimately cost, since the design is still at an early stage and the construction packages have not yet been awarded. It is therefore essential that the EPCM contractor has a strong financial incentive to deliver the project within an agreed budget. This is something that project funders will also be very attentive to.

As part of its core responsibilities, the EPCM contractor is expected, from a very early stage, to develop cost budgets for the construction works and to procure, manage, and administer the construction contracts in line with those budgets. It is extremely rare for an EPCM contractor to offer any form of guarantee that the final project costs will fall within a set budget. More commonly, EPCM contractors may agree to a target price for the overall cost of the works packages and share in any savings achieved — and occasionally contribute to any cost overruns — though even this type of arrangement is uncommon in today's market.

That said, this does not mean the EPCM contractor escapes all liability when a project significantly exceeds its budgeted cost. EPCM contracts typically contain detailed provisions outlining the contractor's obligations to monitor, protect, and advise the Owner on project costs. The schedule of services attached to the contract will usually spell out in considerable detail the level of cost management services required, including the types and frequency of cost reports and estimates to be provided.

A typical overarching cost control obligation might be worded as follows:

"The EPCM Contractor shall be responsible for monitoring and reporting on anticipated final costs for the Project. Costs shall be estimated, budgeted, reported, forecast, and controlled throughout the entire project period. The Contractor must implement cost controls at every phase of the Project, clearly showing how the expected final costs are developing. In particular, once detailed engineering for each section of the works is complete, the costs

determined for that section must be calculated, compared against earlier estimates, and submitted to the Owner in writing. As soon as the EPCM Contractor becomes aware of any matter suggesting that the final costs may exceed the budget, they must immediately notify the Owner in writing, explaining the reasons — even where the EPCM Contractor is not responsible for the additional cost. The EPCM Contractor must then promptly develop proposals and measures to eliminate or reduce the cost overrun, inform the Owner in writing, and provide all information and data necessary for the Owner to make an informed decision on how to proceed."

It is important to understand that under this typical type of obligation, the EPCM contractor cannot be held liable to the Owner simply because the final project costs exceed the budgets and estimates provided at the beginning. However, since the EPCM contractor performs a largely professional role, it will generally be bound by an overriding duty to apply reasonable skill and care in everything it does.

Common complaints and claims brought against EPCM contractors for failing to meet their core professional obligations include: providing an initial cost estimate that was unreasonably low and on which the decision to proceed with the project was based; failing to deliver proper and timely cost updates and revised estimates; proceeding with additional contractor costs without first obtaining the Owner's approval; carrying out engineering work incorrectly or too slowly; failing to properly assess and certify contractors' payment claims; and failing to apply contra charges or pursue other claims against contractors who have defaulted on their obligations.

However, when it comes to the first three of these complaints, it can be genuinely difficult for the Owner to demonstrate that they suffered a measurable financial loss as a direct result.

So while a cost overrun beyond the budgets set by the EPCM contractor will rarely, on its own, give the Owner grounds for a claim, the EPCM contractor will still be expected to explain and justify why the overrun occurred. As the party that holds ultimate control over the project and is responsible for estimating the final costs, it must account to the Owner for the reasons behind any excess spending. In practice, this often leads to the EPCM contractor pointing to the poor performance of the trade contractors — which can then have a knock-on effect, causing delays and triggering additional payment claims against the Owner from both trade contractors and the EPCM contractor itself. This is frequently where disputes between the Owner and the EPCM contractor begin to surface.

The packaging, tendering, and administration of the various trade contracts all fall within the EPCM contractor's scope of responsibility. Since it is also responsible for the design, any coordination failures that lead to claims by trade contractors against the Owner will often trace back to shortcomings on the part of the EPCM contractor. This puts the EPCM contractor in a particularly uncomfortable position, since it is also typically the party responsible for certifying payments and evaluating claims made by trade contractors against the Owner. It is clearly not in the EPCM contractor's interest to openly reveal the true causes

of those claims if they stem from its own failings — such as defective engineering, delayed procurement, or poor construction management.

It is for precisely this reason that the authors strongly believe Owners must have a capable and experienced in-house team to assist in administering the trade contracts and independently overseeing the EPCM contractor's performance.

Insurance

Like any other contract, an EPCM contract contains obligations and indemnities that create potential risks for the Owner, the EPCM contractor, or both. In general terms, insurance is used to cover the risks connected to those obligations and indemnities, as well as to meet statutory requirements — such as an Owner's liability towards its own employees. It should be noted from the outset, however, that certain risks simply cannot be insured against.

Since an EPCM contract is essentially a professional services agreement, the Owner will typically want the EPCM contractor's design obligations to be backed by suitable professional indemnity insurance, which would cover any losses arising from negligent design work. While professional indemnity insurance is widely considered standard practice for consultants operating in the United Kingdom, organizations working outside the UK frequently do not carry such insurance or may be unwilling to provide it. In these situations, if the EPCM contractor does not already hold this type of insurance, the Owner will need to weigh the benefit of having that coverage against the additional cost that would be passed on if the EPCM contractor were asked to obtain it.

When reviewing the terms of any insurance policy, it is important to check both the level of coverage provided and whether the policy operates on an "each and every claim" basis or an "aggregate" basis. Under an aggregate policy, the Owner could find that the available insurance coverage has already been used up if another unrelated claim was made earlier in the same year, potentially leaving the Owner without any meaningful cover. This is a particularly significant concern when the EPCM contract includes a clause — as it often does — stating that the EPCM contractor's liability is capped at the amount recoverable under the insurance policies it is required to maintain.

Other types of insurance commonly required under an EPCM contract, which may need to be taken out by either the Owner or the EPCM contractor, include third-party liability insurance, medical and disability insurance, workers' compensation insurance, and automobile liability insurance. Construction all-risks (CAR) insurance or transit insurance is rarely required under an EPCM contract, since the EPCM contractor is not directly carrying out construction work and is unlikely to be supplying any physical goods or materials. However, consideration should be given to how the EPCM contractor's presence on site may affect the insurance policies maintained by the other parties involved in the project.

Finally, it is worth noting that the EPCM contractor is often required, as part of its services, to advise the Owner on what insurance coverage the project needs and to assess the suitability of policies proposed by other project participants. On large-scale projects, the Owner may be well advised to take out comprehensive, project-wide insurance policies that

name all the various project participants as co-insured parties. This approach gives the Owner greater control over the overall insurance arrangements while also reducing wasted expenditure by minimizing the overlap between the separate policies held by individual project participants — costs that the Owner would ultimately end up bearing anyway.

Net Contribution

If current trends in the UK construction market are any indication, net contribution clauses are likely to appear more frequently in EPCM contracts than they do today. At present, these clauses are more the exception than the rule in both EPCM and EPC contracts, although it is worth noting that the FIDIC Client/Consultant Model Services Agreement — commonly known as the "White Book" — does contain a basic form of net contribution clause.

A net contribution clause is designed to limit the share of any loss or damage that a party is required to pay to only their "fair share" — or the portion that would be considered just and equitable given the circumstances. This calculation is typically made on the assumption that all other parties who share some degree of blame will also pay their respective fair shares. This type of clause exists because construction disputes frequently involve more than one party alleged to be at fault, usually due to a combination of design deficiencies and workmanship failures. This is especially common in EPCM arrangements, where multiple contractors are each in a direct contractual relationship with the Owner.

Under the law of joint and several liability in England and Wales, any single party found to have breached its obligations can potentially be held responsible for the full extent of all damages suffered. This means that the wronged party has the option of pursuing just one of the parties at fault for the entire loss. In practice, if a consultant — such as the EPCM contractor — is perceived to have the greatest financial resources, particularly when backed by a professional indemnity insurance policy, they may end up being the only party sued, even though others were equally or partly responsible.

The net contribution clause was developed as a contractual mechanism to address this imbalance and achieve a fairer distribution of liability. Its effect is that each party is only responsible for their proportionate share of the damages, regardless of whether contributions can actually be recovered from the other parties involved. From a risk allocation perspective, including such a clause effectively shifts to the Owner the risk that some of the contractors or consultants appointed on the project may become insolvent and therefore unable to pay their share.

Dispute Resolution

From the Owner's perspective, one of the most important yet frequently overlooked aspects of structuring an EPCM project correctly is the dispute resolution framework. These provisions should always be drafted with a clear focus on what options and remedies will be available to the Owner if the project as a whole goes seriously wrong.

When things go wrong under a typical EPC contract, the Owner benefits from having a single point of responsibility — the EPC contractor. This means the Owner does not need to worry about dealing with separate or parallel legal proceedings, or the complications of

joining multiple parties into a single action, since in most cases only one party bears responsibility. Under an EPC contract, whether the issue relates to design, workmanship, or delays, the dispute is simply between the Owner and the EPC contractor and can be resolved through a single process in a single forum.

One of the most significant drawbacks of the EPCM route for the Owner is that when things go wrong, the Owner can suddenly find itself fighting on multiple fronts at the same time. It may face disputes with one or more major trade contractors who are claiming extensions of time and compensation for losses and additional expenses. To defend itself effectively, the Owner will need the active support of the EPCM contractor, but may also need to bring in the parties who are truly responsible for causing the problem in the first place. If the issue is late delivery of design, the Owner will want to seek recourse against the EPCM contractor. If the fault lies with another trade contractor, the Owner will need to pursue that contractor directly.

Further complications can arise from inconsistencies in the way the various trade contracts have been drafted. For example, a claim brought by one trade contractor against the Owner might be governed by German law, while the Owner's corresponding claim against the responsible defaulting contractor or the EPCM contractor might be subject to an entirely different legal system — such as Sharia law. While this may sound like an extreme scenario, it is in fact drawn from a real project. This highlights why the EPCM contractor must be mindful of the Owner's interests in such situations. Since the EPCM contractor is responsible for putting the main trade contracts in place and advising the Owner on their terms, both parties should keep this kind of scenario in mind from the outset.

There is therefore a strong case for the EPCM contractor to ensure that the Owner has the ability to bring all potentially responsible parties together in a single set of proceedings, under a single governing law. This protects the Owner from the risk and cost of having to pursue multiple legal actions in different jurisdictions simultaneously, each carrying its own legal risks and expenses.

It is beyond the scope of this article to recommend whether court litigation or arbitration is preferable, or to advise on the most suitable jurisdiction. What is clear, however, is that careful thought must go into drafting both the trade contracts and the EPCM contract on this point. Drafting joinder provisions that are effective, valid, and enforceable is a complex and technically demanding task, and will almost always require the involvement of specialist lawyers — engaged by the EPCM contractor or its in-house legal team — with the cost borne by the Owner.

Conclusion

The growing prevalence of EPCM contracts in international infrastructure and large-scale industrial projects reflects a fundamental shift in the balance of power between owners, funders, and contractors. As the pool of contractors capable of delivering complex, high-value projects on a lump sum EPC basis continues to shrink, owners and project financiers have

been compelled to accept alternative procurement models that transfer significantly more risk back onto their shoulders.

This article has sought to fill a conspicuous gap in construction industry literature by providing a clear and practical explanation of what an EPCM contract is, how it operates, and how it differs fundamentally from the traditional EPC model. Despite the widespread use of EPCM arrangements — particularly in the petrochemical, mining, and power generation sectors — remarkably little has been written to guide owners, funders, and practitioners through its legal and commercial complexities.

The key takeaway is that the EPCM model is not simply a variation of the EPC contract with a modified risk profile. It is an entirely different legal and commercial construct. The EPCM contractor is a professional services provider — a manager and advisor — not a builder. It holds no direct contractual relationship with trade contractors, bears no responsibility for physical construction, and offers no guarantee of overall project cost or completion. This distinction carries profound implications for how owners must structure, administer, and protect themselves throughout the project lifecycle.

Several critical lessons emerge for owners considering the EPCM route. First, a strong and experienced in-house team is not optional — it is essential. The diffuse contractual structure of an EPCM project, with the owner sitting at the centre of multiple direct contractor relationships, demands active oversight that cannot be wholly delegated to the EPCM contractor. Second, the contracts governing those relationships — both the EPCM agreement itself and each trade contract — must be carefully drafted and properly aligned with one another. Inconsistencies in governing law, dispute resolution mechanisms, or liability frameworks can leave owners dangerously exposed when disputes arise across multiple fronts simultaneously. Third, incentive structures matter. Without meaningful financial incentives tied to cost control and project performance, the EPCM contractor's interests may not be sufficiently aligned with those of the owner.

Ultimately, neither the EPC nor the EPCM model is inherently superior. Each serves a different purpose and suits a different set of project conditions, market circumstances, and risk appetites. What is clear, however, is that the choice between them must be made with a full understanding of what each model entails — legally, commercially, and operationally. It is hoped that this article contributes meaningfully to that understanding and encourages further academic and professional attention to a procurement model that, despite its growing importance, remains underexplored in the literature. The development of a recognised standard contract form for EPCM procurement — by bodies such as FIDIC or ECC — would be a welcome and long-overdue step forward for the industry.

Bibliography:

1. Baydemir, Birsu, and Bekir Bera Goksu. “EPC and EPCM contract models.” GSI Articletter 25 (2021): 70.

2. Gaede, AH. “An Unfortunate Shift from FIDIC’s Tradition of Being Even Handed and Focussing on the Best Interests of the Project.” *International Construction Law Review* 477 (2000).
3. Hansen, Seng. “Study on the management of EPC projects.” *International Journal of Civil, Structural, Environmental and Infrastructure Engineering Research and Development (IJCSEIERD)* 5 (2015): 11–22.
4. Henchie, Nick. “FIDIC Conditions of Contract for EPC Projects – The Silver Book, Problems in Store?” *International Construction Law Review* (2001).
5. Henchie, Nick. “The Orgalime Turnkey Contract for Industrial Works – An Alternative to FIDIC’s Silver Book?” *International Construction Law Review* 67 (2004).
6. Henchie, Nick. “Worlds Apart: a comparison of EPC and EPCM Contracts.” *Nascar: Charlotte* (2008).
7. Kärki, Jaakko. “The role of an engineering contractor in quality assurance and quality control in E, EPC and EPCM projects.” (2023).
8. Loots, Phil, and Nick Henchie. “Worlds Apart: EPC and EPCM Contracts: Risk issues and allocation.” *International Construction Law Review* 24.1/4 (2007): 252.
9. Sahu, Ritankar. “The EPCM Delivery Model: A Contractor’s Perspective.” *International In-House Counsel Journal* 9 (2015): 1.
10. Van Dyk, Jurg. “What’s in a name? EPC vs EPCM: contract law.” *Without Prejudice* 13.11 (2013): 38–39.
11. Zhang, Peng, Xiao-min Hu, and Jian-hua Zhang. “A Brief Discussion of EPCMM Mode Befitting the Improvement of General Contract Management – Perfecting Measures Based on EPC and EPCM.” 2011 International Conference on Management and Service Science. IEEE, 2011.