

Demystifying EPCM contracts - What's in an 'M'?

Kluwer Construction Blog
December 9, 2010

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Please refer to this post as: Julie Whitehead, 'Demystifying EPCM contracts - What's in an 'M'?', Kluwer Construction Blog, December 9, 2010, <http://kluwerconstructionblog.com/2010/12/09/demystifying-epcm-contracts-whats-in-an-m/>

Acronyms abound in the wide world of project delivery methods - D&C, DCM, ECI, EPC, EPCM. The list goes on. Even for those of us out there who speak the 'lingo', it can get quite confusing. Engineering, Procurement and Construction (**EPC**) and Engineering, Procurement and Construction Management (**EPCM**) contracts are two project delivery methods commonly used in the mining, mineral processing and power industries. Despite the widespread use of these contract models, there remains a general level of mystification associated with EPCM contracts, and the distinction between EPC and EPCM contracts is not particularly well documented or understood.

In acronym alone, the two contract models appear to be similar. So what's in an 'M'?

EPC contracting

Under an EPC contract, the EPC contractor develops the project from its inception to final completion. The principal provides the EPC contractor with technical and functional specifications for the project, and the EPC contractor subsequently designs, builds and delivers the project in an operational state so that it can be operated at the 'turn of a key' (resulting in the common reference to EPC contracts as 'turnkey' contracts).

EPC contracts are almost always 'lump-sum', where the EPC contractor is limited to receiving a fixed price irrespective of the actual cost of performing the work. The EPC contractor generally takes the benefit of any savings (and the risk of any cost over-runs). In addition, in an EPC contract, the EPC contractor usually provides a performance guarantee (subject to agreed liability caps).

An EPC contract provides a suitable framework for projects where significant engineering expertise is required, and the principal does not need to retain design control or flexibility in execution. EPC contracts are commonly used for large scale resource developments, such as oil and gas plant projects.

EPCM contracting - How is it different?

In contrast to an EPC contract, an EPCM contract is a sophisticated project management or agency arrangement where the EPCM contractor:

- is responsible for the detailed engineering and design for the project;
- administers and manages the project as the principal's agent or representative, including by providing programming and strategic management services; and
- is typically responsible for breaking down the procurement and construction work into packages, managing their tender, overseeing the principal's entry into the trade/supply contracts and managing those trade/supply contracts on the principal's behalf to achieve completion of the project.

Unlike EPC contracts, EPCM contracts are almost always 'cost plus' (or 'cost-reimbursable'). The principal pays the subcontractors directly for materials, equipment and on-site works, and only pays the EPCM contractor its actual direct costs (mostly labour) for performing engineering and supervisory services, plus an agreed margin. The margin charged by EPCM contractors varies depending on the risk assumed (which is usually low), the size of the project (small projects usually have higher margins) and supply/demand position in the economy.

An EPCM contract provides a suitable framework where the nature of the project requires continual design development either due to the complex nature of the project (or its interface with other assets or projects) or because the outputs of the project have not yet been finally determined. So long as the principal has the expertise, experience and resources to manage the progress of the project and can afford to retain the cost and time risk of the project, the principal can avoid payment of a hefty premium to put the risk on a head contractor under an EPC contract.

An EPCM contract may be appropriate where the inherent advantages of other procurement models (largely time and cost certainty) are not able in a practical sense to be delivered, perhaps due to lack of market appetite or capability to accept the risk transfer of traditional models. This is particularly relevant where the principal is unable or unlikely to obtain a suitable contractor and price using an EPC contract model.

EPCM contracts are commonly used for the construction or expansion of large scale heavy engineering facilities or manufacturing plants in the petrochemical oil and gas, mining and power sectors, where engineering and project management skills are more likely to be separate to construction and supply capability. EPCM contracts are not generally used for civil projects, except where the project can be delivered by relatively small, self-contained packages awarded to multiple contractors.

So what's in an 'M'?

There are, of course, many other differences between EPC and EPCM contracts. The fundamental difference, however, lies in the 'M'. The 'Construction *Management*' component of the project delivery method means that the EPCM contractor does not perform construction work and does not usually take full responsibility for delivering the completed project. The principal is able to take a more 'hands on' approach, with greater flexibility to modify project specifications and effect changes to the scope of the works throughout the project. However, as with any project delivery method, if you elect to use an EPCM contract model for your project, it should be moulded to fit the needs of the project and the principal to give your project the best chance for success.