

This article first appeared in a slightly different form in the *Civil Engineering Surveyors' Construction Law Review*, 2009

## PROCUREMENT ISSUES FOR ENERGY PROJECTS IN THE DOWNTURN

By Jonathan Hosie and Stephen Natoli

The current economic downturn presents particular challenges to all involved in the delivery of projects. The changing economic landscape has seen many projects being restructured, downsized, suspended or abandoned altogether. Whilst the energy sector is far from immune from the effect of such economic pressures, it benefits from a series of particular factors that mean its expansion and further development is assured. Projects in the energy sector provide a welcome economic stimulus to development. In the current climate, this will be of interest to members of the ICES.

### Factors impacting development and growth in the energy sector

The “energy sector” is a broad market encompassing a number of different “sub-sectors”. One such grouping could include activities as diverse as projects for the extraction upstream or refining downstream of oil and gas, with the production of LNG, the petrochemical market and the production of electric power through use of coal, nuclear and renewable fuel sources.

Whilst the range of activities in the energy sector is wide, two distinct features sets the energy sector apart from other sectors:

First, the world’s energy requirements are ever increasing and are predicted to continue to do so for a long time to come. This is particularly the case in the high growth BRIC<sup>1</sup> markets and other economies such as Vietnam and Mexico, not forgetting the Gulf States. Some experts are predicting that the world’s energy requirements will increase by as much as 60% in the next 25 years, two thirds of which is expected to come from developing countries.

Second, the need for clean and renewable sources of energy has resulted in new regulations and statutory emission requirements to regulate the supply of power from renewable sources. Crucially for the energy sector, these requirements are underpinned with tax incentives to encourage greater deployment of renewable power sources. Projects that were considered unfeasible a few months ago are now becoming financially and technically viable.<sup>2</sup>

Host governments worldwide have started to make significant political commitments towards renewable energy sources. For example, the European Council’s Climate Change and Energy Package, referred to as the 20-20-20 package, is aimed at reducing greenhouse gas emissions by 20% and replacing them with renewable energy by the year 2020. Importantly, this political commitment is underwritten by fiscal support measures, making such ventures more



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appealing to investors. This has resulted in the EU making significant investments in projects such as offshore wind farms, carbon capture and gas and electricity interconnectivity projects. Further, recent tax incentives for renewable energies introduced within the US are expected to result in a tenfold increase in funding for renewable energies in the US this year alone.

These twin factors of increasing demand and additional support for renewable power sources mean that the energy sector is expected to continue to develop and expand. This growth is happening at a time when the markets for certain other types of construction and engineering activity recede, due to lack of demand or available funding. This has the effect of freeing up capacity for all sectors, including energy, which has a further knock-on effect when considering the procurement of projects in the energy sector.

### Procurement trends

Notwithstanding the factors fuelling the development and growth of projects in the energy sector, project sponsors continue to face a series of challenges in their endeavours to deliver their projects to market. The key remains being able to maintain a sufficiently strong, yet flexible, project model in order to obtain the necessary financial assistance and to ensure successful construction and implementation of the project. Successful projects are those that are able to generate sufficient cash flows to meet repayment obligations to the debt financiers and to deliver the return on investment required by equity shareholders. Whilst a number of factors will influence the sponsor's project model, the one that is particularly interesting to consider in the current economic climate is that of the procurement route for delivering energy projects.

Traditionally, the preferred procurement route for delivering large and complex engineering and construction projects has

been lump sum turnkey contracting (otherwise known as LSTK or EPC contracting), and this is particularly the case in the energy sector. This is largely in response to the demands of funders, who have preferred the appointment of a single contractor under a fixed lump sum contract, who is responsible for the key project risks that influence the sponsor's project model (e.g. time, cost and output performance). Turnkey contracting has the perceived advantage of a single point of responsibility for delivery of both the design and construction of the project; with a fixed price lump sum for the entire works; a fixed programme with a certain date for delivery and the assurance of output performance and reliability standards.

However and in recent times, there has been a noticeable shift away from the turnkey contracting route within the general construction and engineering market towards procurement routes which involve less risk for the contractor. One example has been the rise in use of EPCM contracting. This change reflects the bargaining position of many contractors in the buoyant market that was prevalent prior to the current economic downturn and, to some extent, the increasing size and complexity of projects being tendered internationally. Equally, with a limited stock of contractors with the specialist know-how, resources or experience to undertake such projects on a turnkey basis, funders have had to consider other procurement routes (and greater risks) in the face of rising prices being offered for turnkey contracts and, in some cases, due to an absence of bidders altogether.

### EPCM vs EPC

The shift towards EPCM contracting in the energy sector has been significantly less distinct than in other markets, such as mining. However, that is not to say that the arrangement is entirely foreign to the energy sector. The EPCM approach has been used on a number of projects, particularly power stations and wind farms where the turbine manufacturer

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provides its kit and expertise on a EPC basis but without taking a full assurance risk for the outturn of the project. Project sponsors will often engage, in these circumstances, a specialist engineering firm to oversee the engineering and overall procurement of the project as well as the construction management onshore of the installation, commissioning and completion activities.<sup>3</sup>

Under an EPCM model, the contractor does not build or construct anything. Rather, the contractor develops the design and manages the construction process on the owner's behalf. It is more akin to a professional services contract, having analogies with a typical construction management approach, but with the vital difference that in most cases the detailed engineering and design is carried out by the EPCM contractor.

The construction itself is undertaken by separate contractors engaged directly by the project sponsor. The project sponsor will have direct rights of recourse against those providing the works but does not get a complete assurance from the EPCM contractor (unlike under the turnkey contract model). Thus, if the required outturn of time, capital cost or operating efficiency is not achieved, there is no single contractor to whom the owner (or its funders) can turn for recourse.

This means that whilst the EPCM contractor is responsible for any delays and costs associated with its own engineering and other activities, it will not be responsible for the overall cost or timing of the construction of the project by the other specialist supply and/or installation contractors.

The potential benefits of an EPCM arrangement include the possibility of lower overall project costs (as there is a reduced potential for large contingencies being incorporated into tender prices to deal with completion risks), and greater flexibility in the project development and process (especially in circumstances where the projects may have a less defined

scope or there are anticipated changes to scope).

There are a number of key considerations when considering adoption of an EPCM arrangement. There is no single point of responsibility and therefore a greater potential for multiparty disputes. Further, there is no single contractual assurance as to cost and time for completion of the project. EPCM Contractors also come with limited liability caps, further constraining the ability of project sponsor's to obtain recourse in the event of project distress.

### Impact of economic conditions

The interesting question is how far the current economic conditions will impact on the choice of procurement routes for the development of projects in the energy sector? If one takes the domestic UK construction market as an indicator, the likelihood is a return towards EPC model and a retreat from the EPCM approach.

Thus and in the UK, one could say that 12 to 18 months ago, the norm was two stage procurement, with a first stage front end engineering component. This would convert at the second stage into a lump sum contract, but only when most of the outturn completion risks had been fully addressed, being managed through a well-developed design and through the placement of contracts downstream with equipment vendors and construction contractors on LSTK terms.

However, in the current economic downturn, the norm in terms of procurement approach is illustrated by single stage, lump sum tendering. Contractors are being expected to take on greater risks and owners are expecting reduced prices for goods and labour. With a shrinking workload coupled with certain minimum fixed overheads, the pressure on contractors to assume greater risk and for less reward is obvious. These same pressures are being experienced by the equipment vendors and specialist contractors who make up the supply chain for major projects.

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Predicting the future is an uncertain science but if we were to dust off the crystal ball, we would not be surprised to find a new paradigm in the procurement of projects in the energy sector as we approach 2010. Turbine manufacturers will continue to develop new technologies for new power sources, be it offshore wind farms or wave technologies. New entrants will be coming into the market from a funding perspective, with private equity and hedge funds looking to capitalise on the favourable tax treatment afforded by renewable power projects. Contractors will seek to either differentiate themselves from the pack or join the group of those prepared to take on and manage more risk, perhaps with a risk sharing approach to outturn risks. However, it is doubtful in our view, that there will be a full swing back to the turnkey contracting arrangements. There have been too many high profile casualties in this sector from the last era of LSTK contracting for contractors to want to risk their balance sheet by signing up on terms which are just too one-sided.

We also consider it likely that the EPCM model will survive, albeit the level of liability caps may be expected to increase and there may also be an increase in the expected risk sharing (gain share as well as pain share). However and at the same time, we consider it likely that the pace of the shift towards EPCM procurement will slow.

### Changes in contractual risk allocation

The marked change in the relative bargaining positions of parties arising from the economic conditions alluded to earlier has resulted in project sponsors and their debt providers seeking to extract better terms from contractors. This change has been noticeable in a shift towards more risk transfer towards

the contractor side and has impacted on issues such as:

- the type and levels of security being provided under contracts, with many parties simply not being able to obtain the required levels of security within the market due to decreased bonding capacity. Conversely, it is not uncommon for contractors to now seek some form of security from employers as security for their own payment;
- the period of responsibility for which parties retain liability and the limits of liability, with contractors beginning to accept high levels of liability for longer periods of time (especially as it is uncommon in many European jurisdictions for contractors to accept a retention of liability for latent defects once the contractual defects liability period has expired);
- the responsibility for errors in design (especially where such design has been prepared by others), with owners expecting contractors to assume all design risk, not simply the risk for the design the contractor prepares itself;
- the narrowing of the grounds under which contractors can claim time or money (including an increasingly narrow definition of what might constitute force majeure); and
- which party is responsible for effecting and maintaining insurance under the contract, with sponsors seeking to avoid the costs of double coverage or premiums which contractors add on to insurance policies by effecting owner-controlled insurance programmes.

### Concluding remarks

The energy sector has seen considerable change over recent times. Coupled with the twin drivers of increasing demand for energy and those projects that rely upon increased

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subsidies for renewable power sources, there is now greater contracting capacity on the supply side due to down-turn in other sectors.

It is suggested that, before project sponsors rush headlong into demanding that ever greater risks be assumed by the supply side, they pause for thought. Whilst undoubtedly some sponsors will seek to return to the “good old days” of lump sum turnkey contracting, the attractions may be more illusory than real. There is an old adage that “*the owner always ends up with the risk*”. What use is a full risk transfer if the contractor and its supply chain have capped out their liability at levels materially below the level of the owner’s exposure for performance deficiencies? This is likely to be the case particularly on a revenue generating facility such as a power plant. What use is a right of action against an insolvent contractor?

There are, of course, certain risks that contractors are well equipped to manage. In a traditional coal of gas fired power plant project, the technology is usually well tested in the field. On the other hand, offshore wind and nuclear may be more characteristic of a FOAKE<sup>4</sup> project where the technology risks are greater. As ever, it is a question of making a realistic assessment of risk (likelihood and extent of impact) and having a mature approach in terms of allocating risk to the party best able to manage that risk.

Finally, it is suggested that the current economic downturn means that there is now, more than ever, a need for project sponsors to ensure flexibility in their contractual arrangements. This is because the scope of the works envisaged by the projects may need to be varied, suspended or even terminated if funding becomes an issue. Equally, protections will need to be built in, through stabilisation agreements with host governments, to minimise the risk of withdrawal of or material adverse changes in current tax breaks. The energy sector is unlikely to have seen its last EPCM contract, albeit these contracts are unlikely to be on terms as favourable as they have been for the last five years.

### Endnotes

- 1 Brazil, Russia, India and China.
- 2 In the UK, the March 2009 Budget statement (at paragraphs 7.26 to 7.28) included announcements on renewable financing and investing in the UK low-carbon sector.
- 3 The engineering and procurement being the EP and the construction management being the CM in EPCM model.
- 4 First Of A Kind Engineering.