

EPC Agreement Pricing Issues in First of a Kind Power Plant Projects

By John Lamberski

This article discusses risk allocation issues concerning the price structures of turnkey engineering, procurement and construction (EPC) agreements for large, first of a kind (FOAK) electric power plant projects, such as new advanced design nuclear power plants. For such projects, regulated utility Owners must deal with the tension between the lack of price certainty and the oversight of state commissions who regulate electric rates.

General Pricing Considerations

Power plant EPC agreement pricing structures typically include all of the following pricing concepts applied to different aspects of the project work:

Fixed pricing – the price is fixed throughout the term of the agreement, subject to adjustment by change orders as a result of specified events (including force majeure events, changes in applicable legal requirements, or changes to the facility requested by the Owner). Fixed pricing often applies to certain pieces of equipment where the contractor's costs are well known.

Regulated utility Owners must deal with the tension between the lack of price certainty and the oversight of state commissions who regulate electric rates.

Firm pricing – the price is fixed except that it is subject to escalation/adjustment over the course of the project based on changes in one or more indices (such as Consumer Price Indices, the Handy Whitman Index, the Gross Domestic Product Implicit Price Deflator, or Bureau of Labor Statistics indices) or based on fixed escalation percentages. Firm pricing is also subject to adjustment by change

Cranes and steel construction of a new power plant. January 22nd, 2011.





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orders (as described earlier). It frequently is applied to much of the project's equipment, commodities (for example, concrete) and the contractor's home office services.

Target pricing – the contractor is reimbursed for all project costs (direct and indirect), that are defined as "reimbursable" plus a fee (profit), but subject to a sharing mechanism whereby the contractor receives a bonus (additional fee) if the final project costs are below a pre-established "target price" and where the contractor shares in some portion of the final project costs that exceed such target price. The target price is also subject to adjustment by change orders (as described above). Target pricing often applies to the construction effort. Any number of variations in the target price sharing mechanism can be negotiated. More commonly, it will include an absolute limit on the contractor's exposure to project cost overruns, where the contractor puts some or all of its profit or fee percentage at risk, and where the Owner is responsible to reimburse the contractor for all further cost overruns, regardless of the contractor's degree of fault. Regardless of the parties agreement in this respect, the public policy of many states will prevent the contractor from contractually insulating itself from costs incurred due to the contractor's gross negligence or willful misconduct. Of course, the contractor will not be exposed to cost overruns to the extent that the contractor is entitled to a change order.

Time and materials (T&M) pricing – the contractor is reimbursed for all project costs (direct and indirect), that are defined as "reimbursable" plus a fee (profit). Such pricing applies to aspects of the project that are difficult to estimate or of uncertain scope (for example, regulatory support services).

Price Certainty Challenges

The more an EPC agreement is based on fixed pricing, or even a combination of fixed pricing and firm pricing, the greater the degree of price certainty. Often, the Owner is able to make a reasonable projection of the change in firm pricing escalation indices over the construction period of the project, based on the past performance of the selected indices. Because any particular index could be subject to volatility during any given period

of time, parties sometimes agree on specific provisions to address excessive index volatility. Obviously, fixed escalation percentages provide greater certainty than indices. Escalation provisions can have a large effect on the ultimate price of a project and the drafting of such provisions requires careful attention to detail to avoid disputes. Sample calculations can often clarify these provisions.

It is common to see EPC agreements based entirely on a combination of fixed and firm pricing where the power plant design is proven and the construction period is projected to be relatively short (for example, gas-fired combustion turbines or combined cycle plants). It is unusual to see an EPC agreement for a FOAK project that is not based in part on target pricing and/or T&M pricing.

Price certainty through fixed and firm pricing is difficult to achieve where the design of the project (for example, advanced nuclear reactor designs) is FOAK and not final at the time of execution of the EPC agreement. In this case, the contractor is not able to develop an accurate cost estimate for the project.

As a result, the contractor will be more inclined to bid the uncertain aspects of the project on target pricing and/or T&M pricing. If forced to bid based on fixed and firm pricing, the contractor may significantly increase the contingency or risk premium to cover the uncertainty in his cost estimate. The greater the contingency or risk premium, the higher the overall price and the less competitive the project will be compared to other power project alternatives.

However, even FOAK designs will likely have some aspects that are based on tried and true technology (for example, the turbine-generator) and the engineering, procurement and construction costs of which are reasonably certain. In that case, the contractor should be able to bid a combination of pricing concepts in order to minimize the contingency or risk premium.

Even for finalized designs, contractors may be unwilling to take significant construction cost overrun risk, in which case target pricing will likely be an essential component of the price structure.

This may be true where, for example, there are questions about the availability and productivity of a qualified labor force, or the construction period is very long (as in the case of nuclear power projects). Even so, one can expect that the degree of price certainty an Owner is able to achieve on projects with a substantially final design will be considerably greater than for FOAK projects.

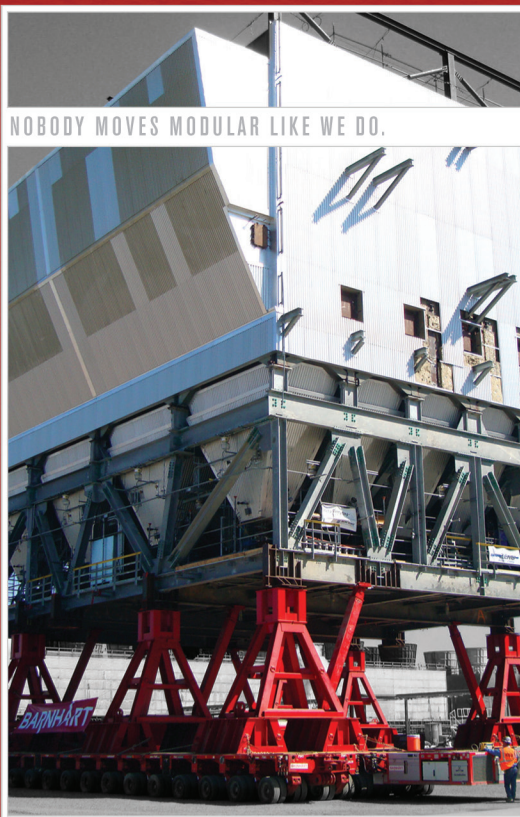
Maintaining Appropriate Incentives

In connection with target pricing structures, there is also a concern that once a contractor has reached its limit (if any) of sharing in cost overruns, there is much less incentive for the contractor to minimize further cost overruns. To the extent that liquidated damages (LDs) for schedule delay have not been exhausted, the contractor will be incentivized to avoid further LDs for delay. However, Owners may be concerned that a contractor will purposely incur extra costs to keep the project on schedule to avoid LDs. The Owner will be obligated to reimburse the contractor for such extra costs except to the

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extent they are excluded from the definition of costs that are "reimbursable" as part of the Target Price.

Admittedly, contractors will have a non-monetary incentive to minimize cost overruns for purposes of future sales and maintaining a solid business reputation. The chances of exhaustion of the contractor's limit of sharing in cost overruns can be minimized by setting that limit at a sufficiently high level to begin with. There may also be creative monetary incentive arrangements that the parties can agree upon to maintain an incentive for the contractor to minimize the final project costs, such as a sliding scale bonus for minimizing further costs.

Public Utility Commission Oversight Implications

In traditional regulated jurisdictions, state public utility commission (PUC) oversight determines a utility Owner's ability to recover in its electric rates the price it pays pursuant to a power project EPC agreement. In such states, price certainty has been and will continue to

be a significant issue in PUC certification proceedings. A PUC is unlikely to subject ratepayers to writing a "blank check" for power project construction costs. Initial PUC approvals typically place a limit or cap on an Owner's ability to recover in rates the cost of the project.

However, Owners may be concerned that a contractor will purposely incur extra costs to keep the project on schedule to avoid LDs.

In the case of cost overruns that exceed such cap, the Owner's ability to recover such cost overruns will depend on whether the commission makes a further finding that such cost overruns were prudently incurred. Imprudence on the part of a contractor is likely to be imputed to the Owner. An

imprudence finding is more likely than not where the cost overruns were within the reasonable control of the contractor (for example, they are not the result of force majeure events). This is a strong incentive for a regulated utility Owner to allocate to the contractor as much as possible of the risk of cost overruns that are within the contractor's reasonable control. ●

John Lamberski is a principal in the law firm Mercer Thompson LLC, located in Atlanta, Georgia. Lamberski's law practice is focused exclusively on electric utility transactions, including the development, acquisition and divestiture of power projects of all fuel types, as well as renewable energy projects. John Lamberski has advised electric utility industry clients for over 25 years and is currently representing several electric industry clients who are proposing to develop or acquire new nuclear power plant assets. You can find additional information about Lamberski's practice and the MercerThompson law firm at www.mercerthompson.com.

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