

Introduction to EVC

One of the primary concerns owners face when implementing large capital projects is the commercial risk associated with the investment. Significant variation in cost or schedule can greatly impact the financial viability of the investment and subsequently, the performance of the business. In response, owner's policies for defining tolerable risk levels and the measures they implement to mitigate risk can aid in equitably sharing the commercial risk with its contractors and subcontractors.

EVC was developed in the United Kingdom in the 1980s to equitably balance the commercial risk among the project stakeholders through a comprehensive risk-reward contract strategy. Simply stated, EVC is a methodology for increasing the commercial certainty of construction contracting by utilizing standard methods of measurement and unit rates framed within the context of a negotiated master agreement between the owner and contractor.

EVC increases the commercial certainty of construction contracting.

The objectives of EVC are to:

- Establish a fair and measurable baseline
- Provide transparency during execution
- Align performance objectives
- Increase cost and schedule certainty
- Benefit all contract parties financially

This brief will discuss the basics of EVC implementation as well as the benefits and risks of using the EVC methodology.

How does EVC work?

Since EVC includes a Unit Pricing component, it is often simply considered to be a Unit Price Contract. In practice, EVC is a comprehensive contract strategy that can incorporate multiple contracting methods including unit pricing, lump sum, cost-plus, etc. depending on the project scope and the completeness of the design development. The EVC is similar to a Master Services Agreement or long-term agreement that establishes the framework for defining and pricing scopes of work between owners and contractors using a project model with standard elements.

The EVC project model defines all of the cost components of a project and establishes the standard methods of measurement for the direct work. Each element of direct work includes a definition, unit of measurement, rules for measurement, progress methods, and required resources. Once the EVC project model is defined, a pricing schedule is then developed with unit prices, direct labor rates, and overhead and indirect rates. These standard methods of measurement and pricing schedules then serve as the basis for contracting, progressing, change control, billing and payment for scopes of work between the owner and contractor.

EVC is a comprehensive contract strategy that can incorporate multiple contracting methods.

Once the project model and pricing schedule are developed, a master “Value Based” agreement is drafted. In addition to the normal terms and conditions typically included in a master service agreement, the EVC includes provisions for:

- Applying the earned value based cost model
- Calculating and reporting both progress and cost
- Calculating and managing contingency
- Identifying and managing change and escalation
- Guidelines for developing, maintaining and modifying schedules
- Guidelines for reviewing project performance
- Procedures to maintain the pricing schedules

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The EVC project model is used as the basis for pricing the scope of work in place of a fully developed, detailed scope.

With the master “Earned Value” agreement in place, specific scopes of work are then released or contracted using the applicable pricing schedules. The general principle is that while the overall work scope may be known, including typical work tasks or deliverables, the detailed scope of work, drawings, and specifications may not be fully developed. So, the EVC project model is used as the basis for pricing the scope of work in place of a fully developed, detailed scope of work. This provides the owner with cost certainty based on a known price for the end product regardless of the resources actually used by the contractor.

During execution, the progress and performance of the project are tracked, validated and reported utilizing the rules defined by the standard methods of measurement. Specific work that cannot be performed under the “Earned Value” concept can be performed under Lump Sum or Cost Plus arrangements depending on the work to be performed and the level of detail of the engineering design at the time the work is being contracted.

Upon completion of the project, the actual quantities, cost and schedule performance are jointly evaluated against the standard methods of measurement to ensure the continued fairness of the agreement and the improvement of performance. The standards are updated and then serve as the basis for the next project. This process is continued for the life of the agreement.

Actual quantities, cost, and schedule performance are jointly evaluated against the standard methods of measurement.

For EVC, the owner develops professional relationships with contractors that are based on fairness by the mitigation of risk while maximizing financial opportunities for all of the parties involved. The jointly developed standard methods of measurement provide a solid foundation, and the long-term nature of the agreement requires a cooperative and mutually beneficial relationship between the owner and contractor. Maintaining these relationships over the course of an extended period of time can and should be mutually beneficial from a long-term economic standpoint while discounting the short-term gain of a more aggressive contracting position.

Benefits of using EVC

The main objective of EVC is to create more cost and schedule certainty for the owner by establishing a collaborative relationship between the owner and contractor that reduces risks and increases benefits for BOTH parties. The goal is not to simply reduce the risk for the owner at the expense of the contractor.

While this may seem beneficial to the owner in the short-term, in the long-term it creates an imbalance of risk that leads to a contentious relationship that can negatively impact the project in numerous ways.

Parties who are familiar with each other are much more likely to effectively deal with issues and disputes on the project in a timely manner. This process of solving these issues before they escalate can significantly reduce risk and the potential cost and schedule delays which can arise in claim situations, mediation, and arbitration / litigation.

Performance contracting can reduce the uncertainty associated with projects including the potential for claims and disputes.

Listed below is a brief summary of some of the key benefits of using EVC for both the owner and the contractor:

Reduced Risk: The collaborative relationships and the standard methods of measurement that are established through the development and implementation of the EVC will help the owner and contractor to align objectives, improve communications, monitor and improve performance, and subsequently reduce the uncertainty associated with projects, including the potential for claims and disputes. Through the relationship, the owner gets a reliable supply of labor and material from the contractor and the contractor gets a reliable demand signal from the owner. This ensures that the right resources will be at the right place at the right time.

Competitive Pricing: The standard pricing schedule based on standard overheads and indirects and measureable direct work deliverables enables the owners to involve the contractor early in project development and reduce the contractor's risk associated with estimates for contingency and profit. The schedules are benchmarked against industry best practices and provide a baseline for continuous improvement that leads to improved profitability for the contractor and a competitive advantage for the owner.

Reduced Bid Costs: The project model and standard method of measurement establishes a common understanding between the owner and contractor that reduces effort and cost in both the preparation of the estimate and the evaluation of the bid. In addition, the owner's effort for performing separate "viability" or "engineering" estimates prior to bidding or contracting the project is streamlined. The success rate for the contractor will be higher, thereby reducing the effort spent on lost projects.

The strategy is based on a different relationship between the owner and contractor that requires investment and continual improvement.

Execution Efficiency: Providing a consistent contract strategy allows all project personnel (owner and contractor) to become familiar with the process and their respective roles. As more capital projects are performed in a similar manner, there is a significant reduction in the learning curve on each project that further reduces risk and increases efficiency in execution. In addition, the standard method of measurement provides a qualified benchmark for gauging performance and identifying opportunities for improvement. It also allows room for future renegotiation if the original assumptions prove incorrect.

Risks of using EVC

The benefits of using the EVC approach are clear and have been proven repeatedly since it was first developed in the 1980s. But, the strategy is based on a relationship between the owner and contractor that requires investment from both parties in the creation and maintenance of the agreement. Under-

funding this investment and not understanding the level of joint commitment required are the key areas of risk to a successful implementation.

Listed below is a brief summary of some of the key risks of using EVC for both the owner and the contractor:

Suitable Parties: Both the owner and contractor must have a business interest in developing a longer term relationship and making the investment in developing the EVC. Unless both parties are fully committed to the process, EVC will not deliver the desired results.

Front End Investment: The development of the project model and standard methods of measurement, as well as the master agreement, require investment in time and resources by both the owner and contractor. The effort is comprehensive in scope and serves as the basis for an extended business relationship. Consequently, both parties must commit to make the required investment.

Both the owner and contractor must have a business interest in developing a longer term relationship.

Schedule Integration: The focus of EVC is on cost, but to be fully successful, the cost components must be tightly integrated with the project schedule. Poor performance against the baseline schedule will undermine any success in cost. Thus, solid project control methods and techniques must be applied to ensure project success.

Project Discipline: The results of the EVC effort greatly depends on having the project controls processes, systems and resources required to establish and maintain earned value based tracking and reporting for both cost and schedule. The standard method of measurement is the mechanism for tracking progress, calculating cost, generating billing and making payment. Both the owner and contractor must have the process discipline in place to maintain commitment and ensure success.

Benefits for the owner and contractor are not realized without a longer term business focus.

Culture Change: EVC is a non-traditional contracting method that requires commitment, collaboration and performance. It alters the traditional contract relationship between the owner and contractor and to perform there must be a focused effort on managing the owner's and contractor's organizational change.

Conclusion

Across the spectrum of contract solutions for construction, EVC is designed to share risk more equitably than lump sum and provide more cost and schedule certainty than cost plus. With the standards based performance baseline, the owner can be assured of competitive pricing and the contractor can realize the benefits of continuous improvement. However, these benefits for the owner and contractor are not realized without a longer-term business focus or an investment in time and resources by both parties.

Blue Marble Risk Solutions is a professional advisory firm based in Houston, Texas that focuses on helping clients manage the significant commercial risks associated with planning and executing capital projects and portfolios. In addition, should construction claims or disputes arise, Blue Marble provides a reactive suite of services that helps clients achieve an equitable resolution.