# ON TIME, AS INTENDED AND WITHIN BUDGET: MANAGING RISK IN SELECTED PROJECT DELIVERY METHODS

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**ABSTRACT**

Construction projects come in all shapes and sizes, as well as methods of delivering the project from the contractor to the owner. Regardless of the project delivery method, what defines a successful project depends on many factors, including from whose perspective the project is viewed, whether the project was completed within the allotted schedule, if the costs of the project were within budget, and whether the project achieved the goals of the parties. While the owner, contractor and design professional share common goals of having the project completed on schedule and within budget, there is substantial deviation in their remaining goals.

Often the design-bid-build, or traditional project delivery method, contains risks, but many of those risks are well known and can be segregated due to the linear nature of the project. The risks are also generally limited to issues arising during or from construction issues, as the project is considered complete upon occupancy and final completion. When alternative or hybrid project delivery methods are utilized, there are increased rewards, as well as increased risks to all parties. Some of these risks can span many years depending on the length of the project and obligations assumed by the contractor or design professional following occupancy or acceptance of the building, structure or equipment.

An analysis of the intricacies; commercial and legal risks; and risk management measures of the design-bid-build, performance based contracting and private public partnership methods of project delivery offers various alternatives to assist in choosing a project delivery method, as well as provides a comparison and reference point for the owner, contractor and designer. Understanding of these issues and associated risks is also one of the keys for successful delivery of a project and the accomplishment of the goals of all parties in the most efficient manner.

## I. Introduction

What defines a successful construction project?

Success inevitably depends on many factors, including from whose perspective the project is viewed, whether the project was completed within the allotted schedule, if the project came in under budget, and whether the project achieved the goals of the parties. While the owner, contractor and design professional share common goals of having the project completed on schedule and within budget, there is generally substantial deviation in their remaining goals.

For the contractor or design professional, other goals may include receiving full payment for their services, preventing injuries or fatalities during construction and having a satisfied customer that will extol the virtues of the project to third parties and reengage the contractor or design professional in the future. While owners have direct goals that include either the addition or expansion of a building, structure or other space; or improvements and upgrades to mechanical, electrical, plumbing or other operating systems, they also typically have indirect goals that center on the purpose or functionality of the project. These could include the replacement of dilapidated equipment, the reduction of energy or operational cost, or the addition of facilities or space that allows the entity to offer initial or further services that increase its bottom line. The goals of the owner also depend on its status as a private or governmental entity, which also affects the funding, design, construction and operation of

the project. Often the goals can be gleaned from the method the owner chooses for the contractor, or design professional to deliver the project, or the project delivery method.

When applied to the construction industry, a project delivery method is a process chosen by the owner for the contractor and/or design professional to accomplish the design, construction and operation of a project and the interrelationship of the parties during the project. Some of the more common variables in project delivery methods are how the project is organized, whether the relationship of the parties is collaborative or relational, commercial terms concerning delivery and the operating system, and how delivery is actually made or implemented. Many factors influence the project delivery method chosen by owners, including the goals of the project; the complexity of design; a desire for flexibility during construction; the expertise and sophistication of the owner; the ability to define the scope of the project; the time in which to accomplish the project; the cost of the project; and the requirements or functionality of the completed project.

The traditional project delivery method in the construction industry is the design-bid-build model, which is generally a wholly relational project delivery model that involves separate and adverse roles of the parties, as well as a tiered, or staged, organization of actions in delivering the project. Over the years, other models such as design-build and construction manager at risk developed, which eventually led to hybrid and expedited models of existing methods, as well as other alternative methods such as performance-based contracting and public-private partnerships, or P3.

Regardless of the project delivery method there are inherent or common risks in all methods, such as failure to timely complete the project, cost overruns and providing deficient work. Other common commercial or legal risks arise out of the contractual agreement of the parties or the applicable laws or regulations pertaining to the project. Counsel's role is to assist in managing these risks, although the objectives of counsel vary depending on who is being represented, and whether counsel is internally employed by the contractor or is private counsel engaged to provide professional services for the contractor.

The following is an analysis of counsel on the overview and comparison of the design-bid-build, performance contracting and P3 project delivery methods, along with the risks inherent in each and how to manage those risks.

## II. The Traditional Project Delivery Method: Design-Bid-Build

### *A. What is Design-Bid-Build?*

Design-Bid-Build is typically known as the traditional or conventional project delivery method in the construction industry. It is a project delivery method in which the owner contracts with at least two separate individuals or entities—the design professional and the contractor—for the design and construction of the project. The contractor thereafter contracts with sub-contractors while the design professional may contract with consultants.

There is no privity, or direct contractual relationship between the design professional and the contractor, nor between the owner and any of the individual sub-contractors or sub-consultants engaged by the general contractor or design professional, respectively. This structure is often characterized as creating a quasi-adversarial relationship between the design professional and the contractor which serves to keep all parties honest while the project is being built.[2]

Another characteristic of the design-bid-build method is delivery of the project in three distinct phases that follow a linear path: (i) the design phase; (ii) the bidding or tender phase; and (iii) the construction phase. The project commences with the owner engaging a design professional who often meets with the owner to determine the goals or needs of the project. During this phase, a collaborative relationship generally develops between the owner and designer wherein the parties discuss the budget of the project, and the designer drafts and completes plans and specifications to accomplish the goals or needs of the owner. Depending on the size and scope of the project, the design professional may engage consultants to provide plans and specifications for certain operating systems associated with the project, all of which the design professional coordinates among the various sub-consultants, and by and between the consultants and the owner. Once the plans and specifications are developed by the design professional and

approved by the owner, the project is placed out to bid.

General contractors bidding on the project typically obtain copies of the design documents, and provide them to various sub-contractors to bid on certain defined scopes of the project. Once the general contractor receives the bids of the sub-contractors, it prepares its bid and submits to the owner. Thereafter, the owner—with or without the assistance of the design professional—ranks the bids, and if necessary or desired, may conduct interviews with one or more bidders prior to selecting the lowest responsive bidder. If all the bids exceed the proposed budget, the owner can reject the bids and abandon the project, request the design professional redesign the project for rebid, or seek to have one or more of the general contractors work with the design professional on reducing the scope, or cost of the project through a value engineering process.

Following the bidding phase, administrative tasks are accomplished to ready the project for construction, such as updating the design documents, negotiation and execution of a contract between the owner and the contractor, and securing the necessary permits to undertake or commence the construction. Once the agreement of the parties is in place, construction commences with the general contractor coordinating the work of the various sub-contractors, while the design professional coordinates the work of its consultants, on the one hand and the relationship of the contracting team with the owner on the other. To the extent additional information is needed or unforeseen conditions are encountered, the contractor turns to the owner or architect, or both, to provide direction on how to proceed. Depending on the contractual relationship between the owner and designer, some or all of these decisions may be made by the architect as the construction administrator. Once the project reaches an operational or functional stage, it may be deemed substantially complete by the owner or architect. During this period, the owner or architect will also review the project with the contractor and develop a list of items to be completed prior to final acceptance of the project. Once these tasks are performed to the satisfaction of the owner, final acceptance is granted and the project is complete. One of main differences between this delivery method and the other delivery methods discussed herein is delivery is effectuated upon completion of construction. At that time, the owner becomes responsible for operation and maintenance of the project. In performance contracting and P3, however, the completion of construction is only a step in the process, as the contracting entity is frequently responsible for operation and/or maintenance of the project.

### *B. Benefits and Disadvantages of Design-Bid-Build Project Delivery Method*

One of the most commonly cited benefits of the design-bid-build model is it is the most conventional and commonly accepted project delivery method, thereby ensuring all parties are familiar with their roles, the process and what is necessary to deliver the project. Costs are generally easier to control, as the price for the project is based on complete plans and was attained through competition among several contractors. In the event that unforeseen conditions, undefined issues or other discrepancies are encountered, they can be addressed by change orders, which must be approved by the owner. In this method, once the project reaches the bid phase, the design team also becomes more impartial and assists the owner in assuring the quality and cost of construction. By having completed plans and specifications prior to construction, it is often also easier to ensure the adherence to quality standards. Finally, if you are a governmental or public entity, utilizing the design-bid-build method comes with the added assurance that there are defined legal and procedural guidelines for the project.

A common disadvantage of the design-bid-build method is the length of time to complete the project, as fast-tracking is typically not an option in a true design-bid-build project. The contractor also generally has little input in the design phase, which could lead to inefficiencies in the design-construction process, such as conflicts in the interpretation of the construction documents or complications due to scope creep. This method also discourages collaboration between all parties, which could affect quality, cost, time and efficiency. As an offshoot, the owner is, in part, required to warrant the design to the contractor, as there is often no direct contractual relationship between the designer and contractor. Further since the relationship of the parties is governed by two distinct contracts, and there is no contractual

relationship between all parties, it may be difficult to ensure all parties are in the same forum to resolve disputes. For example, it is fairly common for the design professional to enter into a standard form AIA contract with the owner that contains an arbitration clause, while the contractor may enter into a contract with the owner that provides that disputes shall be resolved through the applicable court. While this scenario may not seem like a major concern during negotiation of the contracts governing the relationship of the parties, if it is not addressed initially by the parties, it could be very difficult and costly to all parties to ensure each is in the same forum to resolve a dispute that may concern all parties.

The design-bid-build project delivery method is preferred if the owner knows exactly what it wants from a project;, the project can be well defined during the infancy stages; there is a firm budget and available funds; fast-tracking is unnecessary; and it is required by applicable law or a governing body.

### *C. Risks Inherent in the Design-Bid-Build Project Delivery Method*

In all projects there are commercial and legal risks, some of which may overlap. Despite meticulous planning, projects rarely turn out as expected for any party. Frequently problems arise from miscommunication, unforeseen circumstances or other complications, cost overruns, delays, unrealistic expectations, the failure to perform according to agreed upon contractual terms and conditions or one party attempting to take advantage of another party, the latter of which may occur through the possession of superior information or sophistication, or due to an intentional effort to conceal facts and circumstances.

As in all project delivery methods, one of the more common risks in the design-bid-build delivery method includes the failure of one party to perform, or one party providing sub-standard or defective performance in its work, or obligations. For example the designer or owner could make errors in calculating construction costs; the designer could submit inaccurate, incomplete or deficient plans; or the contractor could perform deficient or sub-standard construction that either has to be redone or addressed through compensation adjustments. Although atypical, contractors could also abandon the project or cease performance mid-project. Designers could also fail to adequately oversee or coordinate the construction process, or fail to provide timely redesign or other necessary information. Risks also may include one party failing to comply with the appropriate standard of care, or performing their tasks in a negligent manner as determined by prevailing legal standards. While risks associated with failures to perform typically arise through services provided by the contractor or design professional, they can also arise due to non-payment or delayed payment by the owner, or the failure of the owner to provide necessary or timely information to the contractor or design professional to complete the project.

Another common risk inherent in design-bid-build contracts is somewhat related to the failure to perform, and includes the failure of a party to comply with certain provisions of its contract with another party. Failures to comply with contractual terms typically lead to one party placing the other in default, which is usually a precursor to a breach of contract allegation. Any of the foregoing failures to perform undoubtedly result in increased risks for the performing parties vis-à-vis their relationship with the non-performing party.

Although less common, parties also may attempt to utilize their sophistication about the design or construction process, or knowledge that is unknown to all parties, to take advantage or defraud the other parties. These and other risks common in construction contracts, discussed in greater detail herein, not only result in increased time and costs to complete the project, but typically cannot be amicably resolved. Instead, the consequences of these actions must be resolved through the litigation or arbitration process, which is costly, from an economic, time and production standpoint, as well as a major risk, in and of itself.

While risks cannot be entirely eliminated, they are more easily controlled in the conventional or traditional project delivery method. Customers require less education concerning the project delivery process and the linear path of design and construction prevents or segregates some of the risks that may occur on the project.

Means to manage these risks include rejecting or modifying the standard “one size fits all” contract

and modifying the terms and conditions of the project to the goals of the parties. Familiarity with the terms and conditions of your contract is also a must, as is ensuring everyone on your team is aware of the terms, conditions, obligations and individual responsibilities. It is also imperative to fully document the project. Meeting minutes should be maintained and circulated among the parties. If changes are made, they should also be documented. If approvals are required and provided by the owner or designer, they should also be documented and maintained in a project file. If information is required to perform, the requests should be documented. Another risk mitigation measure is ensuring there is the necessary project coordination and management, both internally (with the members of the project team) and externally (with the other participants in the project).

Other risk mitigation techniques include procuring the appropriate insurance to cover design or construction defects, performance or payment bonds and ensuring indemnification agreements are contained in contracts governing the relationship between various parties, thereby allocating the risk to the parties that may cause damage during the delivery of the project.

## III. The Performance-Based Contracting Project Delivery Method

Another project delivery method frequently utilized in the construction industry is the design-build project delivery method. Design-build is non-linear and generally involves the owner contracting with either a joint venture between the designer and contractor, or with an entity that is responsible for both design and construction. The designer/contractor then coordinates and contracts with the various subcontractors and sub-consultants to complete the project. While this project delivery method is frequently much quicker, and if managed correctly, cheaper, it also comes with additional and heightened risks since many aspects of the project are not defined when contractual agreements are executed. Over the years, this delivery method has been altered at the request or desire of owners, or the contracting entity, to address some of the disadvantages of traditional delivery methods and additional needs of owners. Over the last thirty years, one of the offshoots of the design-build method is the performance-based contracting project delivery method.

Performance contracting is a project delivery method that specifies and guarantees an end result for the owner, as opposed to specific details or a process of how the project will be delivered to the owner. In a standard performance contract, the guarantee may involve completing the project at a fixed price, in a certain time frame, or to achieve certain goals or standards such as the achievement of available tax credits, LEED certification by the USGBC or certain targets or building system performance standards that may reduce energy and operating costs of the owner. The focus of this section is on the latter, which is also commonly referred to as energy efficiency performance contracting.

Energy efficiency performance contracting is a project delivery method that typically involves a single contract for the design, construction, installation, commissioning, and measurement of energy efficient equipment or systems at facilities, which services guarantee avoided energy and operational costs greater than the costs of the installed equipment—and financing and services costs associated therewith—over a specified period of time. Under a performance contract, the contractor may also agree to operate and maintain the equipment and systems installed under the contract.

In performance contracting parlance, the designer/contractor is typically referred to as an energy services company or ESCO. In addition to the services referenced above, the ESCO also frequently arranges or aids in financing for the project, tailors the project to the energy or operational needs of the owner, and measures and verifies the energy and operational savings of the project. Project delivery does not end with completion of construction, but continues through the life cycle of the project, which frequently ranges from 10-20 years. One of the main differences between an energy efficiency performance contract and other performance contracts is the assurance of energy and operational savings, which are established through a defined measurement and verification process under the contract.

Performance contracting is not appropriate, however, for all projects. It is most suitable for energy and water conservation projects

associated with renovations or modifications to mechanical, electrical and plumbing systems within a facility; building envelope improvements or other insulation or weatherproofing measures; replacement of windows; replacement or upgrade of HVAC systems or equipment; lighting retrofits; installation or upgrade of energy management systems; and upgrading or replacing other energy or water consuming equipment.

### A. *The History of Energy Efficiency Performance Contracting*

Energy Efficiency Performance Contracting began in the late 1970's through a joint effort of several corporate and governmental entities, and was first utilized almost exclusively by governmental or public entities to combat rising energy costs.[3] As model legislation was drafted, federal and state governments began adopting energy savings statutes. According to Dr. Shirley Hansen, one of the first proponents of performance contracting, most of the early performance contracts and energy savings models were based on shared savings agreements.[4] Shared Savings agreements were based on a model in which the user (i.e., the governmental entity) and the ESCO shared a pre-determined split of energy cost savings, as determined under methodologies agreed upon in the performance contract.[5]

Although these contracts could take many forms depending on the risks negotiated and borne by each party, it was typical for the user to retain the risk of fluctuating utility rates, which relieved the ESCO from "betting on the energy markets," and instead it only bore the risk of achieving the efficiency of the installed energy conservation measures ("ECMs"). The Shared Savings model worked well when utility rates stayed the same or escalated. The ESCO industry was challenged when paybacks began to exceed the contract length and trough ingenuity, the current Guaranteed Savings model was developed.

Under the Guaranteed Savings model, an ESCO would guarantee a reduction in energy consumption or energy units to the user. Under most Guaranteed Savings contracts there were no upfront capital costs to the user, as the owner financed the project over a period of time, with the costs of the equipment and financing costs being offset by reductions in its energy and operational budget. The risks of fluctuating utility costs still typically remained with the user as did variables related to weather, fluctuations in consumption and changes in use of the facilities affected by the ECMs. The ESCO guaranteed the units of energy consumed would be reduced as a result of the installed ECMs. To protect itself against fluctuating utility or fuel costs, typical contracts would include ceilings, floors or other stipulated amounts for unit costs of energy. Occasionally parties negotiating an energy savings contract would utilize both a Guaranteed and Shared Savings model in the same contract. Typically, this is not recommended as it only serves to create confusion for the benefit of the legal profession.

Over the past thirty years practically every state has created legislation enabling energy efficiency performance contracts. During this time, performance contracting has allowed many federal, local and state agencies to reduce energy consumption and operating costs at their facilities, while contemporaneously resolving deferred maintenance issues and funding capital expenditures that would have otherwise been practically impossible to fund through typical capital outlay mechanisms and funding. The most successful entities utilizing performance contracts have been municipal and state governments, universities, schools and hospitals (the "MUSH" markets), where tax exempt financing is available. In recent years, however, performance contracting has expanded into the private sector.

One of driving forces behind the growth of the performance contracting industry is the joint efforts of trade organizations such as ASHRAE, NAESCO, the AEE and DOE, which created uniform guidelines by which to measure and verify energy savings. The two most common guidelines or standards that establish performance contracting principles and measurement and verification standards are the International Performance Measurement and Verification Protocol ("IPMVP") and the Federal Energy Management Program ("FEMP").[6] The IPMVP has been adopted by local, state, national and international organizations and has been translated into over ten languages. It is the standard in the industry for measurement and verification purposes. The latest version of the IPMVP covers three volumes: (i) Volume I-Concepts and Options for Determining Energy and Water Savings; (ii) Volume II-Concepts and Options for Improved Indoor Environmental Quality; and (iii) Volume III-Applications.[7] One of the most fundamental provisions in the IPMVP is

the establishment and formulation of a standardized M&V Plan, which is imperative to an accurate calculation of energy savings. Savings measurement is also addressed, and is based on the following formula:

> Energy Savings = Base Year Energy Use – Post Retrofit Energy Use + or – Adjustments[8]

Perhaps one of the lasting legacies of the IPMVP is the creation of four savings measurement options from which the field of measurement is drawn:

- Option A (Retrofit Isolation-Key Parameter Measurement)—Option A is typically utilized where estimations of certain parameters are reliable and more cost effective than actual measurements;
- Option B (Retrofit Isolation-All Parameter Measurement)—Option B measures all key performance parameters;
- Option C (Whole Facility)—In Option C, energy savings are measured throughout the facility and it is commonly utilized where ECMs affect the whole facility; and
- Option D (Calibrated Simulation)—In Option D, savings are measured for the whole facility but are determined based on computer modeling. Option D is typically utilized where ECMs have been installed in a facility in which no historical information is present.

FEMP does not enjoy as widespread acceptance as IPMVP, as it has been used almost exclusively in federal performance contracting. Unlike the IPMVP, FEMP provides a better framework and test practices for the calculation of operation and maintenance savings occurring from the installation of ECMs. Recently, some of the key energy management and conservation guidelines in the IPMVP were integrated into the LEED certification standards established by the USGBC. Successive iterations of both the IPMVP and the LEED standards will likely continue to overlap and become more integrated, which will likely lead to further expansion of the industry. Accordingly, an understanding of both IPMVP and FEMP is essential to mastery of energy efficiency performance contracting.[9]

### *B. Performance Contracting 101*

Performance contracting differs from conventional contracting in many ways, with one of the most notable differences concerning the length of the project. Under a conventional construction contract, once construction is complete, the project is deemed delivered and the owner assumes control of the project. Under a performance contract, however, the project delivery cycle continues for a set time, which is usually equal to or greater than the time necessary to pay for the equipment installed under the performance contract. While this is one of the most distinguishing factors, there are many other differences.

Instead of an owner identifying a need, many performance contracts originate from ESCOs recognizing the needs of the owner, or developing and defining general needs of the owner that are then jointly refined by the parties. As a result, the portion of the life cycle from concept to construction takes much more time than a conventional construction project.[10] Projects frequently originate through feasibility studies that are either performed by the owner or a third party, which identify potential energy and operational savings opportunities, as well as dilapidated equipment that must be replaced for the owner to continue to provide its core services. Depending on the results of the feasibility study, the owner may chose to let the project for bid. Typically if the owner is a public entity, this is required through a RFP or RFQ process. To ensure the ESCOs bidding on the project are reputable and experienced, typical RFPs include the following[11]:

- General description of contractor, history and financial strength or experience (credit rating);
- Description of contractor's performance contracting experience and specific performance for projects similar to those contemplated for the particular site;
- General description of services available;
- Description of program steps to implement the project;
- Identification of total target savings, preliminary cash flow analysis and terms of guarantee;
- Identification of operational savings; and
- List of potential ECMs

Once the successful proposal is selected, the ESCO typically undertakes an investment grade or technical energy audit that expands and elaborates upon the feasibility study. It is usually an extensive audit and analysis of historical information concerning existing equipment and operating expenses at the facilities of the owner. During this process, the ESCO identifies ECMs and other Facility Improvement Measures (FIMs) to install at the facilities that are intended to reduce energy and operating costs. Depending on the size or scope of the project, which can increase or decrease while the audit is being performed, this process may take several months.

Utilizing this information, an ESCO can develop a *pro forma* evaluation that analyzes and compares energy consumption and operating expenses utilizing "real world" equipment and services versus alternative "hypothetical world" equipment and services. Through the audit, the ESCO is also able to establish a baseline from which to measure the energy savings once the performance period commences. Based on this assessment, the user (typically a governmental entity) determines whether to proceed with the performance contract. If the user agrees to proceed, the parties negotiate the terms and conditions of the performance contract, which often include further analysis and refinement of the energy audit and the proper method to measure the energy and operational savings upon completion of the construction the project. While the contract is being negotiated, if the owner does not have funds available for the project, which is common, the ESCO may also arrange financing for the project through a capital leasing lender that finances the cost of the equipment over the term of the contract.[12] Due to the length of the project, the various obligations assumed by the parties, securing financing and the satisfaction of other legal or regulatory requirements, the contract negotiation process can also take several months.

Once the contract is executed, a notice to proceed is typically issued and construction commences. The ESCO and its sub-contractors may commence construction with the demolition of existing equipment and operating systems. This is followed by installation of the proposed ECMs, FIMs and other construction measures. Once the ECMs and/or FIMs are installed, the parties test and commission (if applicable) the new systems. If the systems pass the operational tests, construction is complete and the performance or guarantee period commences. Depending on the terms of the contract, during the performance period the ESCO may also perform maintenance on the equipment installed under the contract, oversee the management of the energy systems, recommend ways to decrease energy consumption and improve energy and operational savings, perform other energy conversation services and, in all instances, measure and verify the energy savings achieved on a periodic basis. Under the measurement and verification portion of the project, the former "real world" no longer exists. It is the new "hypothetical world," or baseline, which must now be compared with the new "real world" resulting from the installation of the equipment and services under the performance contract. The performance contract contains parameters and stipulations negotiated and agreed upon by the parties that allow the parties to most accurately compare the new "real" world to the new "hypothetical" world, or baseline. In the event that the project doesn't achieve the energy and operating savings as guaranteed *under the contract*, through the measurement & verification methodology set forth therein, the ESCO is required to compensate the owner for any shortfall. Compensation may take many forms including a cash payment, providing additional equipment or services, or some other means, as directed by the terms of the contract.

### *C. The Benefits of Energy Efficiency Performance Contracting*

Two of the main benefits of performance contracting for the owner are the avoidance of up-front capital costs and the reduction in energy and operating costs for the owner at selected facilities where the ECMs and/or FIMs are installed. Another common benefit is the performance contracting model allows governmental entities and other budget-constrained entities to replace old, antiquated equipment with newer, more efficient equipment that will not only reduce energy consumption but will reduce the maintenance and upkeep related to the old equipment. The facility owner not only obtains new equipment and building systems, but enjoys the reduced energy and operational costs upon completion of the project.

Another benefit is that many smaller projects can be consolidated into one larger project with a single source of accountability for the design,

construction, installation, and, in some cases, operation and maintenance. The owner also is typically not left with the standard one year warranty for equipment performance, as the guarantee of energy savings operates for a period of multiple years. This also eliminates the risk for the owner of design or construction defects related to faulty engineering, poor equipment installation or equipment failure, which sometimes don't materialize until after expiration of a standard warranty period. Still other benefits include reduced environmental impact, improved building performance and improved occupant comfort.

### *D. Risks of the Performance Contracting Project Delivery Method*

#### *(1) Risks Common to both Parties*

While there are risks in conventional contracts, the risks are heightened exponentially in performance contracts for both the owner and ESCO. Risks common for both parties include members of the team not fully understanding the project; knowledge of how savings will be determined and, if necessary, adjusted; the terms and conditions of the contractual arrangement between the parties; applicable law governing performance contracting; poor project management during both the construction and guarantee period; and miscommunication between the various members of an owner's or ESCO's team.

Frequently parties attempt to use boilerplate or standard form contracts in lieu of engaging counsel. While this is not always a good approach, the risks are mitigated when the boilerplate contract is tailored to the specific project. Regardless of the party, consultation and assistance of experienced counsel is beneficial to a successful project. Standard template scopes of work and measurement & verification plans should not be utilized as no two projects are the same and these contracts.

One of the biggest problems in this arena is when counsel is engaged, the engineers or technical personnel want to draft the schedules and attachments to the contract, while leaving the attorney to negotiate the "terms and conditions". Unfortunately the entire contract contains terms and conditions, including many instances where the main contractual document and the schedules overlap. If all personnel are not familiar with the entire agreement, there is the possibility that one party may agree to unwanted contractual terms, as well as the increased likelihood for ambiguities, discrepancies and internal inconsistencies in the contract documents. Another key area where review by legal counsel might be helpful in public sector contracts is to ensure compliance with applicable codes or laws. If the contract does not comply with applicable laws, all or a portion of it could be nullified. A legal opinion regarding enforceability and authorization from the owner's counsel is a good way to manage this risk. In fact, most lenders require this of the owner before funding the project.

Both parties also need to ensure that the baseline is accurately defined. It needs to appropriately address the inflation of utility, water and labor costs, as well as weather, facilities usage and consumption adjustments. For the owner, it is recommended that it have someone other than the ESCO verify the investment grade audit and baseline. For the ESCO, it has to perform its necessary due diligence and, together with the owner, ensure that the baseline is based on verifiable and historical energy and operational cost data over an appropriate time frame. If there are anomalies, they need to be explained or addressed. In addition to defining an accurate baseline, the parties need to ensure that there are appropriate and defined methods to adjust the baseline due to fluctuations in the weather, demand, utility rates, consumption, changes in building or building system usage, or the responsible party failing to perform their operation or maintenance responsibilities under the agreement.

#### *(2) Risk Management for the Owner*

A common risk for the owner is failing to fully understand the project, how energy savings will be determined under the contract, its operation and maintenance responsibilities during the performance period and other contractual obligations that are necessary to facilitate the realization of energy and operational savings. Frequently, the persons who promoted and procured the project within the owner's organization are no longer around during the performance period, and in some instances may have only been concerned with replacing old

equipment that couldn't be obtained through traditional procurement channels. The owner must be aware of the risks that it is allocated under the contract. Ignorance of the law is not an excuse or defense. For example, if utility rates go down, increase more slowly than expected or spike due to fluctuations in commodity costs, the actual savings (depending on the ECMs involved in the project and M&V protocols utilized under the contract) may not materialize and the customer may be left to bear the risk. It is imperative to realize that the ESCO cannot control weather, demand, utility rates or other unforeseen factors at the facilities, all of which are risks that must be borne by the owner.

Another risk for the owner is a project that is based on large operational savings, or stipulated savings. Operational savings should be carefully reviewed and verified by the owner agency. If the avoided operational costs arise from decreased labor, eliminated maintenance contracts or avoided capital costs, the savings should be reviewed and determined to be "real" savings. This is an owner responsibility that must be taken seriously, or the owner should not proceed with the project. Generally speaking, stipulated savings should not exceed more than twenty percent of total savings for the project. Through studies undertaken by the GAO and other governmental organizations, it was found that many projects had more than fifty percent stipulated savings and regardless of whether or not the projects had "real" savings, it was disputable as how to verify these savings.

Some commentators have observed that another risk for the owner is the ESCO not seeking out the most favorable financing rates for the owner. This risk, however, is illogical and does not hold up to scrutiny. The ESCO desires the most favorable rates so it can provide a larger project that maximizes potential ECMs, thereby allowing a larger portion of funds to be spent on project costs as opposed to financing costs, which increases the profits of the ESCO as opposed to the financing company.

The owner should also seek to include a provision in the contract that protects it against errors and omissions discovered in the design of the project. For example, if it is discovered that the baseline was created from flawed engineering analysis, which errors were not attributable to information furnished by the owner, the owner should have the ability to adjust the baseline, and/or recover from the engineer for the error or omission.

Overall, owners must be diligent when procuring a performance contracting project. This can be accomplished by thoroughly reviewing the RFP response and qualifications of the ESCO, including consulting references listed on the proposal or other facilities where the ESCO has recently undertaken projects. The owner's representatives must also educate themselves on performance contracting and the performance contracting process generally—it cannot rely on the ESCO to provide the education. It is also imperative for the owner to be fully aware of the terms and conditions of its contract with the ESCO, and the risks it has assumed thereunder. Too often owners state they have no risks under a project, when such a claim is simply without merit. It is a construction project and all parties have risks. The energy savings guarantee does no remove these risks.

*(3) Risks and Risk Management for the ESCO*

In addition to the above risks common to all parties, ESCOs should also be extra aware of the laws, rules and regulations governing performance contracting in their jurisdiction. Due diligence should be undertaken to research applicable legal and regulatory requirements, as well as reviewing bid documents prior to submitting proposals. Another method to keep updated is to become engaged in trade organizations and review their periodic publications concerning changes in the law.

Occasionally, however, the applicable legal requirements may be modified, revised or amended after execution of the contract. For instance, suppose building standards are modified after the permitting of the contract, or suppose certain sustainable development standards are adopted after execution of a contract. What happens then, and which law applies—the old or the new? Generally, the law in place at the time of contract execution would apply to the contract, but this may not always be the case.

Consider the following hypothetical. Assume an ESCO enters into a legal and binding energy efficiency performance contract with a governmental agency under an existing law. Upon commencement of the performance period, the

law is amended, but not specifically as a result of the contract at issue. Although the new law shouldn't apply to the contract, if it is deemed to be a merely a clarification of the old law, it might be found applicable through no fault of the ESCO. As with most legal issues, it is left for a court to use its judgment in determining whether the new law substantially changed, or merely clarified existing law. If it is deemed to have merely clarified the existing law, the ESCO may find itself subject to an interpretation of laws that govern its contract, which had it been present at the time of contracting, would have caused it to avoid entering into the contract.

Unfortunately, there is often a disparity in sophistication between the ESCO and the owner, and the promises and covenants inherent in a performance contract may create a high burden for the ESCO if it becomes embroiled in litigation. Often the ESCO must prove:

- The design, construction and performance processes were followed reasonably and within standard of care;
- The outcomes contemplated by the project were realistic;
- Reasonable efforts were made to communicate expected outcomes, assumptions and variables; and
- The final contract reasonably reflects all necessary components for ESCO to demonstrate performance under guarantee.

The ESCO must also be cognizant of, and appropriately structure, the terms of the guarantee, including the monitoring program, the IPMVP measurement protocol for the ECM, as well as the commodity cost to be used in the contract. Some of the typical problems or risks that may also arise under a performance contract include:

- The project "sponsor" leaving the organization and his/her successors do not understand PC and have bias against it;
- The owner does not understand how the contract (or FIMs) will impact utility bills; and
- Limited or poor documentation on baseline and post-retrofit savings analysis and methodology in contract.

Construction contracts can be viewed as a minefield of risks, with some of the more common areas of concern being terms and conditions relating to termination, warranty, representations, indemnification, insurance, default and dispute resolution procedures. One instance where performance contracting differs from conventional construction contracting is in the area of warranties. In a conventional construction project, the obligations of a contractor typically end within one year of acceptance. Under a performance contract, however, warrant such as the assurance of energy savings remain until the performance period expires.

### *E. Risk Mitigation Measures for the ESCO*

With regard to mitigation of risk under the contract between the parties, the ESCO should consult with legal counsel to address contractual risk allocation and terms and conditions, including specifically those addressed above. For example, when dealing with the representation and warranty provisions under the contract, the ESCO should ensure that it is not making representations or warranties regarding equipment performance, or promises that *pro forma* savings will be achieved, which conflict with the terms of the savings guarantee.

If the actual savings or performance do not equal what was provided in the pre-contractual *pro forma*, the owner or other parties that relied upon the information, may, under limited circumstances, have a cause of action against the engineer or modeler for fraud, negligent misrepresentation, unfair trade practices or other violations of federal or state law.[13]

The following example illustrates the potential pitfalls associated with providing unverified or unsubstantiated *pro forma* data to a potential customer. Imagine an energy efficiency developer or ESCO is promoting and attempting to sell a project to an owner who is contemplating the installation of ECMs at its facilities. In connection with the energy audit, the developer provides various *pro forma* data, which represents that substantial savings are probable as a result of the project. The owner is still not convinced and is concerned that the margin is not enough to justify the project. The developer returns to the *pro forma* statement and modeling data, and through modifying certain variables or including a larger

or smaller subset of historical data, substantially increases the projected energy savings. Although the developer advises the owner that these numbers are subject to change and that savings have increased due to different variables, which may or may not materialize, the owner agrees to the project. During contractual negotiations, the guaranteed cost savings are finalized and set forth in the contract between the parties. Although the owner agreed to the project under the most aggressive modeling assumptions, which showed the largest cost savings, more conservative energy savings are memorialized in the contract and are guaranteed by the ESCO thereunder. Once the performance period commences, although the savings are much less than the *pro forma* statements that allegedly induced the owner to undertake the project, the ESCO satisfies the guarantee under the contract. Does the owner have a cause of action against the ESCO? What if the contract showed the guarantee had been met, but due to errors or omissions in the *pro forma* statements, the actual cost savings were much less than the savings under the contract? What if the discrepancies were due to things outside the control of the ESCO, which were an unprecedented anomaly from available historical data, such as changes in wind, weather or commodity indexes on which key variables in the contract were based?

The foregoing scenarios give rise to several interesting issues. In almost all cases, the parties will only be required to meet their contractual obligations. Consequently, the ESCO should only be held to comply with its guarantee under the contract. The guarantee is the guarantee. If false or inaccurate information was provided to the owner, however, and the owner reasonably relied on it and suffered damages as a result, the owner may have a claim against the ESCO or developer. Although the burden will be on the owner, if it can prove that the information was false, or should have been known to be false, or if the ESCO or developer was negligent in the performance of their services, a claim may be viable. It should be noted that the sophistication, education and experience of both parties will be considered in analyzing whether the ESCO or developer is liable on any of the foregoing grounds.

One of the easiest ways to mitigate risk is to provide information that is accurate and can be supported by data and good engineering practices. Also it should be noted that if you defraud or misrepresent information to a governmental entity, you may not only be liable for fraud but potentially guilty of a felony in some states. Not only will this lead to a lawsuit, but also a potential prison sentence. Other suggestions to mitigate risk include clearly defining, allocating and explaining the allocation of risk under the contract and providing standard disclaimers on *pro forma* data that the data provided is only for informational purposes, is only good for a limited period of time, is based on the information provided in the *pro forma*, may change at any time and cannot be relied upon by any party as indicative of future results or performance. Although these warnings do not provide definitive protection, they may mean the difference between simply a bad project and a project that is accompanied by many years of litigation.

Although warranty issues are typically not as big of a concern as under conventional contracts, due to the assurance of energy savings under the performance contract construct, warranty issues can arise. Standard express warranties should be included in contracts, including waivers of implied warranties of merchantability and fitness for a particular purpose, especially if the equipment is manufactured by the ESCO.

The ESCO should also ensure it has the appropriate insurance required under the contract, as well as appropriate indemnification provisions that allocate risks to the party responsible for the injury or damages under the contract. With regard to the dispute resolution provisions, while the ESCO should attempt to avoid what is commonly referred to as "home-town cooking", arbitration is not always the answer due to the excessive costs of arbitration and the inability to appeal unfavorable rulings.
Termination provisions, especially termination for convenience clauses are another issue that must be carefully examined. Unlike other government contracts, in which the "benefit" to the governmental entity cannot be measured in economic terms, an energy performance contract provides a precise and exact measurement of the financial benefit to the governmental entity, as determined under the contract documents governing the project.[14] As noted by one commentator, this remains true even if the contractor is terminated for convenience or cause—the governmental entity will still achieve the project benefits.[15]

A common method for ESCOs to manage this risk in energy performance contracts is to include terms providing that, if the performance contract is terminated, the governmental entity is obligated to pay a "termination value" equal to (1) any accrued and unpaid amounts then owed by the governmental entity, (2) the amount then necessary to terminate any outstanding obligations to the financing entity, and (3) any applicable tax due as a result of such prepayment. The contractor's energy savings guarantee applies for all periods prior to, but not after, the election to terminate by the governmental entity.[16]

Failing to define certain terms and obligations under the contract will lead to uncertainty, miscommunication and, potentially, litigation. Following claims arising from a lack of understanding, ambiguous contractual obligations are often the main cause for dispute between the ESCO and owner. In that regard, the following terms should be included and appropriately defined in any performance contract, with the ESCO ensuring that it has properly allocated risk under the contract:

- **Defined Terms**: Definitions of terms, such as savings, guaranteed savings, baseline, O&M savings and what constitutes the foregoing. All aspects of energy and operational savings must be clearly defined in the contract, including what is guaranteed and the scope of the guarantee. The owner should be aware of the methods of measurement and that consumption reductions are guaranteed based on historical utility rates, consumption trends, building and building system usage, demand and weather patterns. The customer must be made aware that the calculation of savings will not be a simple comparison of the utility bills of the customer. The customer should also be aware of the risks it is taking under the contract, such as fluctuations in weather, energy costs, building and building system usage and demand. It is also important to prepare and anticipate your customer is not in the room. You should also be aware that the person to whom you are explaining the project and savings calculations may not be there in five years, and thus, the savings must be well documented. If another person assumes control of the project for the customer, it is also imperative to address the savings issues with them once they have become oriented to their job.
- **Term**: The guarantee term must be clearly defined under the contract, as well as the obligations of the parties during the construction period and the performance period.

- **ECM/FIM Intent**: The intent of each FIM or ECM should clearly be set forth under the agreement.

- **IPMVP/FEMP Methodology**: Depending on the FIM or ECM installed, the ESCO should ensure that it is providing the appropriate methodology to measure the energy savings (as discussed herein), and that the customer understands the methodology being used and why it is used.

- **Reporting Period, Analysis Procedure and Format**: The frequency with which the savings will be measured, verified and reconciled should be clearly set forth under the contract, as well as the format that the ESCO will use to report the savings. The ESCO should walk through a sample format and calculation with the customer prior to construction to ensure the customer is aware of how often savings will be measured (typically monthly); verified and reconciled (typically annually); and reported (through proprietary software programs or equations set forth under the contract).

- **Baseline**: What comprises the baseline (e.g., period, consumption and conditions) should be defined under the contract. While this is somewhat associated with the calculation of savings, the customer should clearly understand how the baseline is established and that the baseline will be the benchmark for the calculations of the guaranteed savings.

- **Bases for Adjustment**: The ESCO should ensure that it is protected for changes in consumption, the customer not performing its obligations under the agreement and changes, additions or

subtractions in occupancy, usage or consumption at the facilities.

- **O&M Requirements**: If applicable, the responsibilities of the ESCO for maintenance of the equipment installed—and potentially other equipment of the customer—should be set forth under the contract. Additionally, the obligations of the customer with respect to operations and maintenance of the ECMs should be defined under the contract. The ESCO should conduct meetings with the owner during the training on the new equipment to ensure the owner is aware of its responsibilities. The ESCO should also attempt to only provide maintenance for its equipment, or at least what it can control under the contract. For example if an electrical surge destroys a chiller and the management of the electrical system is under the control of the customer, the surge and destruction of the chiller should not be the responsibility of the ESCO. The ESCO should only be responsible for what it was contracted to perform.

- **Dispute Resolution Provisions**: The ESCO needs to ensure the contract addresses a means to resolve contractual disputes, which may two-tiered. While the parties may recommend a means to resolve standard contractual disputes, some progressive contracts contain a provision that a pre-selected third party will resolve disputes related solely to the energy savings calculations. While this method may not only save time and money related to litigation and ensure that an experienced person is deciding savings disputes, it should be realized that typically this provision will be treated as an arbitration provision that is only reviewable by a court under special circumstances.

- **Limitation of Consequential Damages**: Another recommendation is to insert one or more provisions in the contract where the parties jointly agree to waive consequential damages vis-à-vis one another. Although consequential damages are interpreted differently depending on the jurisdiction, most general indirect economic losses such as lost revenue, profits, and even lost energy savings or efficiency arising from the failure to meet deadlines or performance standards, are considered consequential damages. Although some courts occasionally disregard this provision (or limit its applicability), if the consequential damages are not defined, it is beneficial to include a waiver provision in the contract for added protection. In any event, the owner's remedy under performance contracting projects is already contractually prescribed through the contractual assurance of savings.

- **Intellectual Property Rights**: While the ESCO should allow the customer a license to utilize its proprietary software, if necessary, during the term of the agreement, it should also clearly set forth that the software is protected and proprietary and any use terminates with the termination of the performance contract.

- **Scope**: The scope of work should be adequately defined under the project and the ESCO should ensure it has enough time to complete the work, as well as that it will not be held responsible for events of force majeure

Throughout the contract, it is imperative to document the project. Meeting minutes should be held and forwarded to all parties for circulation and approval. Any delays experienced during construction, whether or not they affect the savings, should be documented as well as the party who is responsible for the delays. Generally speaking, equipment should not be substituted unless it is approved in writing by the owner.

While the foregoing may seem to involve comprehensive work on the part of the ESCO, it is much easier to manage expectations and desires in contractual negotiations as opposed to during performance under the contract.

During the performance period, it is necessary to perform all maintenance and service obligations (if contracted to do so), including measurement and verification services. If the contract provides that you are to provide surveys, ensure the surveys are provided pursuant to the terms and

conditions of the contract. If the contract provides maintenance personnel will be on-site 7 days a week, ensure that someone is always on-site, or if not, written approval is obtained. It is also important to train your whole project team, all of which should know the terms and conditions of the contract and their responsibilities thereunder. The ESCO should have a performance engineer or other managerial engineer to coordinate quarterly meetings between the members of the project team to ensure all tasks are being performed pursuant to the contractual terms and conditions.

It is also necessary to educate the client and ensure that goals and objectives are aligned. Detailed project meetings should be held during the energy audit phase, prior to and during construction, immediately prior to the commencement of the performance period and regularly thereafter throughout the performance period. Some owners don't understand the savings calculations and may be inclined to modify the guarantee methodology to a simple comparison of utility bills from one year to the next. Generally speaking, this is not how project performance should be evaluated as there are multiple factors that will drive a customer's utility bill that are outside the scope of the project and outside of the control of the ESCO. This is one of the principal reasons energy organizations like EVO and FEMP developed methodologies for evaluating performance based contracting projects. These methodologies are not solely for the benefit of the ESCO, however, and must be fully understood by the owner if it is undertaking a project.

ESCOs should also endeavor to measure savings whenever possible, or if savings are stipulated, they should be based on reliable pre-contractual and historical measurements, with mutual agreement on the stipulated savings. For certain items, it is impractical to measure the savings due to the cost to measure and verify over the life of the contract. For these items, the reasons the stipulations are made should be well understood by the parties. If the customer is wary about these savings, it may lead to problems down the road. Over the last several years, stipulated savings have come under attack by state governments in the states of Louisiana, Oklahoma, Indiana and Massachusetts. In many of these states, the attacks are due to a lack of understanding, which could have been avoided through collaboration between the ESCO and the owners. Although the end result could have been catastrophic for the various ESCOs in these states, in that many governments were seeking to nullify the contracts and recover all fees paid under the contracts, the ESCOs were able to resolve the issues through interacting and collaborating with not only their agency users but the state governments to explain why the stipulated savings were in fact true savings.

As ESCOs are performing engineering in designing the project and calculating the energy savings, the ESCO must also be aware of the appropriate standard of care in the jurisdiction in which the project is undertaken and for what it can be held liable. For example, assume that an engineer has been hired as a consultant on a design build energy efficiency project to perform modeling concerning expected energy savings over the life of the project. Although the contractor was the party that contracted with the engineer, both the contractor and owner rely on the data provided by the engineer in entering into the project. Once the project becomes operational and the performance period starts, savings not only fail to materialize, but the savings are completely converse to those projected and set forth in the contract. It is soon discovered that not only did the engineer fail to consider all known variables, including changes in historical information and other information concerning the purchase of energy by the owner, he failed to collect and analyze a large enough sample from which to base his assumptions. In other words, incomplete information was employed in the energy savings calculations and utilized in the contract. In an attempt to reform the contract, the owner not only sues the contractor for the information provided by the engineer, but also sues the engineer as it relied on the information.[17] Concurrently, the contractor sues the engineer for a breach of the standard of care. Will the engineer be found liable? Although the result will depend on facts and circumstances, as well as expert testimony establishing the standard of care, even if the engineer isn't found liable, he will spend several years and considerable funds defending his reputation and work. Consequently, the design professional needs to be fully aware for the period for which it may be liable for errors and omissions and ensure that it has the proper and necessary insurance (with the required riders for specialty engineering) to cover any potential errors or omissions of the design professional.

Another concern for the ESCO involves the financing of the project. If the ESCO arranges the financing for the project, it needs to ensure that it does not become so involved in the financing that it is deemed to be an agent of the lender, in the event that the lender and owner become involved in a later dispute over payments, or payment terms. Meanwhile, the ESCO needs to ensure that the financing agreements are coordinated with the performance contract. This is perhaps most important if payments are required to be made during the construction period. Projects are typically structured so that payments are deferred until construction is complete, or interest only payments are made during the construction period. Occasionally if payments are required during financing, the ESCO will ensure that necessary ECMs are installed to produce installation period savings to offset the financing payments. Regardless of how the financing and payments are structured, the ESCO needs to ensure the process of payments is addressed under the performance contract and that the guarantee is not deemed to commence prior to the project becoming operational, or the ESCO being able to cover this risk through the installation of ECMs are to produce installation period savings.

If possible, the design professional should also refrain from guaranteeing any pre-contract financial models or *pro forma* data. If guarantees or warranties are made, the design professional should ensure it is compensated appropriately for the increased risk and exposure. As discussed above, it would also be prudent to ensure the warranty or guaranty is covered under the professional services liability policy. In many instances, a warranty or guaranty alters the potential claim from one of a breach of the standard of care to a breach of an express warranty, which is often not covered under the professional liability insurance policy of the design professional. In that regard, the design professional should review its insurance policy to determine applicable coverage, and if necessary, explore the inclusion of sustainability riders to the policy, which some companies now offer for an increased premium.[18] It is imperative that if there is a claim, it is covered under your insurance policy, or else you could be stuck footing the entire bill, for not only the alleged damages, but legal costs and expert fees as well.

Good project management is also a key to a successful project. All members of the team should be fully aware of their responsibilities both during construction and performance. Too often, projects collapse or litigation ensues because someone was not performing their tasks under a contract, albeit potentially small tasks, or someone thought the tasks was going to be done by another employee. This should never happen.

A final recommendation that goes hand in hand with good project management is to engage legal counsel during all aspects of negotiation, contract drafting and execution. Additionally, ensure that counsel is available for consultation during the construction and performance of the project, especially if certain guarantees, warranties or representations are made under the contract. Experienced counsel may be able to assist you in mitigating damages that may occur for failure to perform under the contract. Ultimately it is your decision whether you want to hire counsel on the front end or back end of the contract. On most projects, it will be one or the other, or both.

## IV. The Public Private Partnership (P3) Project Delivery Method

### *A. The History of P3 as a Project Delivery Method*

Public-private partnerships, or P3, have been utilized domestically as a project delivery method since the first settlers arrived in America almost four hundred years ago. The first version of a public private partnership in the United States can be traced to a 1652 project by the Water Works Company of Boston to provide drinking water to the city of Boston.[19] Although P3 has never gained widespread acceptance as a project delivery method in the U.S., it has been utilized most frequently in the transportation and highway construction industry. Due to impending budget crises for governmental entities, the ability to shift the risks of project construction and maintenance to a private entity, removal of the project costs as obligations for governmental entities and its success as a project delivery method internationally, this is likely to change in the near future as P3 spreads to more industries and governmental services. For example, a California court recently noted the expansion of P3 to the following projects:

> construction of educational facilities …provision of architectural and engineering services for certain

> infrastructure projects… satisfaction of local housing needs … protection, acquisition, restoration, preservation, and management of wetlands…stewardship of agricultural and grazing land…and the improvement of water supply, quality, and infrastructure[20]

P3 can be employed anywhere there is a public-private partnership, wherein the private entity puts capital at risk to deliver a service for the use of the general public.

P3 has been specifically defined by the National Council for Public-Private Partnership as follows:

> a contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility[21]

Although P3 projects employ the structure set forth in the above definition, the actual delivery of the project can vary greatly depending on the undertaking, desires of the owner and risks the private entity is willing to bear. While the intricacies of each variation on this project delivery method is beyond the scope of this paper, some of the more common iterations on the general P3 project delivery method are design-build, design-bid-build, design-build-operate-maintain ("BOM"), build-operate-transfer ("BOT"), design-build-finance-operate ("DBFO"), design-build-finance-operate-maintain ("DBFOM"), and build-own-operate ("BOO").[22]

Some of the key differences in P3 from a typical design-bid-build project include the following:

- Instead of the scope being defined through design, the scope is defined by performance at the outset;

- A P3 relationship is typically governed by a single contract as opposed to multiple agreements between an owner and various parties;

- Instead of the adversarial relationship between at the owner level with consultants and contractors, the parties operate as part of a team;

- While the private entity may be paid for some costs of construction, it typically does not get paid until the performance is delivered as specified in the agreement; and

- The private entity is responsible for operation and maintenance of the constructed project, as opposed to the constructed project being released to the control of the owner.

Also, as with performance contracting, the project life cycle typically extends beyond the construction period and continues into the management and operation of the constructed project, thereby allowing the private entity the opportunity to obtain revenue and a return on its investment, such as through tolls or fees. Accordingly, as in performance contracting, it should be no surprise that the concomitant risks in a construction project are exponentially heightened when delivering the project via the P3 project delivery method.

Similar to performance contracting, the typical P3 project begins with an initial proposal or discussion between a private entity and the government. If the project is considered feasible and allowed under applicable law, then the project will move to pre-planning and the requests of proposals or qualifications stage. If current law does not allow the project, it is not uncommon for the governmental entity to lobby for specific statutory amendments allowing the project. Following the proposal stage, the selection process is undertaken whereby the governmental entity selects the party that best qualifies for the project based upon the lowest bid, financial security, anticipated return and other preset qualifications. Thereafter, the governmental entity negotiates a partnership or project agreement with the governmental entity specifying the scope of the project. Once the contract is formalized, design and construction commence with the

contracting firm bearing all, or a majority of the risk on the project. Once construction is complete, the project enters the operations or performance stage, which remains under the daily control of the contracting entity. While the government is typically not involved in the day-to-day operations of the enterprise, it does typically ensure it has overriding veto power over certain aspects of the project.

*B. The Risks of P3*

Prior to undertaking any P3 project, it should first be determined if the project structure is legal and whether standard state procurement laws apply to the project. Many states provide statutory authority for P3 projects, but state statutes are not created the same. For example, some states may allow P3 projects for only highway transportation projects, whereas other states may provide that it is allowed for any project where the private entity takes substantial risks and is approved by the governing authority of the jurisdiction. Still yet, other states may be completely silent on the matter. To ensure compliance with applicable authority, it is advisable to research P3 guidance in your jurisdiction as well as request from governmental counsel the authority of the governmental entity with whom you are partnering to enter into the project. When in doubt, consult legal counsel regarding the legality of the project and any compliance requirements that must be met with regard to state or local law. Otherwise, if there is not special legislation authorizing the project structure, you may be entering into a contract for a public work that must meet all public procurement requirements. And if it doesn't, the project can be deemed to violate public bid laws, and thus, determined to be null and void.

This, in fact, transpired in the recent case of *Diamond Asphalt Corp. v. Sander*, where a governmental and private entity entered into a joint bidding agreement that bundled utility relocation work with the governmental agency's street improvement work.[23] The agency took bids for the combined work for the private utility relocation and the street improvement and awarded the contract to the contractor with the lowest total bid. However, the winning bidder had allocated its costs between the public and private utility portions of the job, and the utility reimbursed the city for the private utility portion plus a fee. As a result, although the contract was awarded to the lowest overall bid, the contract did not get awarded to the contractor that had the lowest price on the public portion of the work. A disgruntled bidder that didn't get the project sued to protest the award. Although the city argued that the utility relocation work should be considered public work, the court rejected that argument and held the contract procedures violated competitive law, thereby effectively nullifying the P3 relationship.[24] Unfortunately, in many jurisdictions, nullifying this relationship can have severe consequences, as the contractor will usually be prevented from recovering a profit on the project, and sometimes may be unable to recover any profit for the work performed. Stated differently, being mistaken about whether or not a P3 project is legal can result in a windfall for the governmental entity while being catastrophic for the contractor.

Once it is determined if the project structure is legal and whether or not compliance with public bid or procurement laws is required, the next issue that must be addressed is the relationship of the parties under their joint venture agreement, or other contractual arrangement. While it is imperative to have a clearly defined agreement establishing the obligations of the parties throughout the construction, operation, maintenance and management of the project, the P3 agreement should definitively address each of the following:

**Control:** Control generally centers around which entity will control the project during each phase of the project and will the governmental entity have ultimate authority or decision making control over each phase? While it is typical for the entity with its capital at risk to control the project, when a governmental entity—and thus, tax dollars—is involved, this is not always legal, much less impossible. This unfortunately flies in the face of the rule of thumb that one should typically only bear risks that it can control.

**Engagement of Partner**: As one commentator notes, when allocating control it is also important to examine who is making the upstream decisions that an owner is typically required to make. Is it somebody who has authority to make prompt and decisive calls, or is it a bureaucratic beast requiring input from multiple public agencies in addition to the concessionaire.[25] Needless to say, an owner group that cannot make decisions often leads to a troubled project, and more often than not, contractors and subcontractors suffer. To

address this issue, ensure there is commitment from senior governmental officials who will take an active role in the development of the project. If necessary, educate all potential personnel that may have a role in the project concerning the basis for the partnership, the roles of the parties and how the project will make money. Unfortunately, some things simply can't be contracted out and the law doesn't provide for it. [26] If you don't feel comfortable that you will have support from all levels of the government, walk away from the project.

**Other Contractual Necessities**: To address the foregoing inequities, the private entity should ensure the agreement contains specific provisions clearly defining the authority of the governmental entity, default provisions of acts or omissions of the governmental entity, as well as indemnification provisions that require the governmental entity to indemnify the private entity for its negligence that causes damage to the private entity.[27]

The agreement should also contain provisions that establish that the lack of a decision after the passage of a specified period of time (e.g., 10 days), is treated as acceptance of the decision proposed by the contractor. When this language is employed, however, one should be extra careful about documenting the project and ensuring that proper notice requirements have been complied with, as well ensuring all requests are made in writing through appropriate communication channels. In that regard, electronic mail should be specifically included as an acceptable medium of communication for notice under the agreement.

**Governmental Issues**: Another concern that must be addressed in the contractual arrangement is expropriation of the project by the governmental entity or changes in law or policy regarding the contract. Again, the private entity should ensure that the agreement protects in with regard to these issues, including artfully drafted termination, default and indemnity provisions as well as the inclusion of provisions mandating recoupment of the fair market value of the costs of construction of the project, return of capital deployed into the project and costs for other services put into the project should an event of expropriation or other modifications in the law occur that affect the project.

**Delegation of Responsibilities:** The contract should also address the responsibilities and obligations of the parties for each phase of the project, what happens if those responsibilities are not met and how the parties will resolve disputes. As the project is anticipated to be a long term partnership, no party wants to be engaged in long term litigation that serves no interests other than those of attorneys. Instead, for construction or operational issues it is recommended the parties appoint an objective legal or technical professional to resolve these issues on an expedited basis and reserve standard breach of contract and legal disputes for the court system.

**Division of Revenue:** When dealing with the responsibilities of the parties, the anticipated revenue stream and sharing of the same should also be clearly defined in the agreement. If the revenue stream is based on a mathematical calculation or equation, it is imperative that a *pro forma* analysis be provided to the owner of the anticipated revenue stream, basis for the revenue stream, sharing of the revenue stream and what happens if the anticipated stream is not received. On many tax increment financing projects or other projects funded with tax credits or other governmental incentives, there may be the availability to create a project reserve fund to hedge the potential of lost revenues in one or more periods. The availability of the foregoing will depend on applicable law and the financing related to the project.

Besides the foregoing legal risks, each P3 project also contains commercial risks that could have legal consequences. For example, financial risks such as inflation, construction cost overruns, changes in the credit markets, higher operations or maintenance costs than originally anticipated or revenue deficiency can substantially affect the project, even to the extent that it is no longer viable. Typically most P3 agreements, as well as applicable law, will mandate that the contractor bear each of these risks. While this may be the nature of the beast, it doesn't mean that there are not available risk mitigation measures that can be integrated into the contract to limit the damages, such as a waiver of consequential damages provisions; rejection of liquidated damages clauses; incorporation of *force majeure* clauses; cost escalation clauses; and adjustments to the compensation to be received under the contract due to any material change in conditions. While one may receive pushback from a governmental

entity on these issues, they should be allowed considering the risk undertaken by the contractor. Another recommendation is to ensure that where applicable, appropriate insurance coverage has been obtained for these and other risks, and that the riders for any coverage are maintained throughout the life cycle of the project.

Ultimately, P3 can be a very beneficial project delivery method for both public and private entities as it is typically cheaper than conventional construction since the private entity has money at risk; enables the governmental entity to obtain needed infrastructure or services without the expenditure of upfront capital; and potentially can provide a hefty profit to the private entity.

## V. Conclusion: Which Project Delivery Method is Preferable?

Considering the risks and other issues discussed herein, one may ask which project delivery method is preferable or most advantageous for a project, or how do I ensure that I don't end up in litigation. Unfortunately, there is no bright line answer. Often the most appropriate method depends on the desires and necessities of the owner, facts and circumstances surrounding the project, one's experience in delivering under each of the foregoing project delivery methods and other variables. If you are the owner, when choosing a project delivery method for your project, you should take all factors into account including budgetary issues, what method best enables you to measure your risk, the certainty of the final cost, complexity of the project, how much collaboration you want during the project and the total value of the project. With regard to the latter, you should recognize the life cycle costs of the project, as opposed to solely the upfront construction costs.

Regardless of the method that is chosen, there will be risks in every project. Whether you work for the contractor, design professional or owner, you should seek to mitigate these risks through the assistance of legal counsel, well drafted contractual documents, exemplary project management, fully documented projects, and collaboration with the other parties throughout design, construction, execution, and if applicable, operation.

[1] Michael T. Durham is a partner at Crawford Lewis, PLLC in Baton Rouge, Louisiana.

[2] Mark A. Terrill, *Legal Aspects of Design-Build Method of Construction Delivery*, August 1998.

[3] Historically energy efficiency performance contracting has emphasized lighting retrofit and HVAC efficiency. Over the last several years, this industry has expanded to municipal wastewater and water treatment facilities as well as renewable energy projects utilizing wind or solar power.

[4]See generally, Dr. Shirley Hansen, PHD., *Performance Contracting: Expanding Horizons* (2nd Ed. 2006).

[5] ESCOs develop, design, and finance energy efficiency projects, install and maintain the energy efficient equipment involved, measure, monitor, and verify the project's energy savings.

[6] The IPMVP provides an "an overview of current best practice techniques available for verifying results of energy efficiency, water efficiency, and renewable energy projects." See generally International Performance Measurement and Verification Protocol, 4th edition (2009), available for download at www.evo-world.org.

[7] The IPMVP is published by the Efficiency Valuation Organization, or EVO.

[8] Id.

[9] A word of caution—although the IPMVP may be the standard by which energy savings and measurement is defined, if it is not incorporated in the applicable contract or adopted by the jurisdiction in which the services are provided, savings measurement may be interpreted under a less reliable method, or even a standard developed by legislative and administrative officials, which has no roots in best engineering practices.

[10] Douglas O. Smith and Jacqueline J. Ferber, *Performance Contracting with State and Local Governments*, Public Contract Law Journal, 25 Pub Cont LJ 393 (Winter 1996).

[11] Id.

[12] Financing is typically achieved through a capital or operating lease of movable property. For governmental entities, a lease is usually required to contain non-appropriation language that limits the obligation to the annual funding provided to the entity. During the term of the lease, the ESCO and/or its assigns own and retain a security interest in the equipment. Since the equipment is not owned by the owner during the project term, it is not considered debt under the laws of most states.

[13] Again, the information provided herein is purely for educational and informational purposes and is not a full legal analysis of a claim for fraud or the likelihood a party would prevail on the prosecution or defense of said claim, all of which depend on the facts and circumstances as well as the governing jurisdiction.

[14] See FN 9.

[15] Id.

[16] Id.

[17] It should be noted that while the owner does not have a contract with the engineer, it may have a claim for negligent misrepresentation or even breach of the standard of care, depending on the jurisdiction. The elements of prevail on a claim of this nature are beyond the scope of this paper and vary depending on the facts and circumstances and jurisdiction in which the claim is raised.

[18] Although inapplicable to professional liability policies, some builder's risk and general liability coverage has begun to be provided in the form of "green" endorsements to cover such things as vegetated or solar roofs and alternative power systems. This coverage may include the cost of hiring a third party professional to ensure peak performance of the systems, as well as compliance with applicable certification standards. Energy Star rated electrical equipment, roof and insulation materials, energy-efficient lighting systems, and water-efficient interior plumbing. In all likelihood, both endorsements and riders will soon be available that will significantly affect professional liability coverage on sustainable development

[19] Seth Eaton and William D. Locher, *Feature: Give PPPS a Chance: Public-Private Partnerships May Be a Solution to California's Infrastructure Funding Crisis*, 31 Los Angeles Lawyer 20, January 2009.

[20] *Coastside Fishing Club v. California Res. Agency, 158 Cal. App. 4th 1183.* 1200, *(Cal. App. 2008)*

[21] Nat'l Council for Public-Private Partnerships, *How PPPs Work*, http://ncppp.org/howpart/index.shtml (last visited Sept. 2, 2011).

[22] See *Report to Congress on the Costs, Benefits and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects*, December 2007.

[23] See FN 20.

[24] Peter C. Halls, *Issues for Designers, Contractors and Suppliers to Public Private Partnership Projects*, *The Construction Lawyer*, (Summer 2010), 30 Const. Lawyer 22.

[25] Id.

[26] See FN 20.

[27] While some commentators have argued that indemnification is not always available from a public entity, the general rule is that public entities can only provide indemnification for their own negligence. If the entity is the party causing the damage, this is unquestionably its own negligence, and thus, allowed.