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**BEFORE THE  
PANEL ON PUBLIC-PRIVATE PARTNERSHIPS  
OF THE HOUSE COMMITTEE ON TRANSPORTATION AND  
INFRASTRUCTURE**

**HEARING ON  
OVERVIEW OF PUBLIC-PRIVATE PARTNERSHIPS FOR WATER AND  
WASTEWATER PROJECTS  
MARCH 25, 2014**

Chairman Duncan, Ranking Member Capuano, and members of the panel, thank you for the opportunity to appear before you today. My name is Bruce Tobey and I am a Partner in the law firm of Pannone Lopes Devereaux & West, LLC, where I am part of our national Municipal Infrastructure practice team led by my Partner and colleague Teno A. West, who has joined with me in the preparation of this statement. Over the course of our careers, which cumulatively exceed fifty years, we have served as elected and appointed officials in the operation and management of water and wastewater utilities, worked in the operation of an investor-owned water utility, and practiced as attorneys in the municipal infrastructure field.

From those endeavors, we have acquired extensive first-hand experience with the workings of Public-Private Partnerships and their potential to provide solutions to the nation's financially-strapped water and wastewater utilities. I am grateful for this opportunity to share with you our perspectives on this matter.

## **I. INTRODUCTION**

I was privileged in 2001, while serving as the Mayor of Gloucester, Massachusetts, to testify on behalf of the National League of Cities and the Water Infrastructure Network before two Congressional hearings regarding the nation's then-existing water and wastewater infrastructure financing needs. One was conducted by the Environment and Public Works Committee, Subcommittee on Fisheries, Wildlife, and Water of the United States Senate and, the other, by the Transportation and Infrastructure Committee, Subcommittee on Water Resources and the Environment of the United States House of Representatives. On those occasions, I argued for increased federal participation in filling the substantial gap between the financial resources available to meet those needs and their much larger projected costs. Today I will speak to the role that Public-Private Partnerships [P3s] might play in helping to fill that still substantial gap.

How big is that gap thirteen years later? The U.S. Environmental Protection Agency's (EPA) most recent needs survey estimates \$293.7 billion is needed today by clean water agencies to comply with the Clean Water Act (CWA). A similar story can be told on the drinking water front:

\$334.8 billion in drinking water infrastructure investments is needed over the next 20 years to comply with the Safe Drinking Water Act.

The reasons for these needs are the same now as they were in 2001:

- implementation of new, more costly, and more complex federal mandates which, in effect, substitute federal priorities for local priorities;
- the substantial decline in federal financial participation in meeting wastewater mandates; and
- the simultaneous expiration of the useful life of water infrastructure installed at different times.

This last consideration warrants explanation. The nation's water infrastructure represents more than a century of investment, substantially funded by local ratepayers. A significant part of the nation's water infrastructure dates from the late 19th century. More recent expansions of these systems took place following the two world wars. All of this means the newest systems are over 60 years old. Furthermore, the newer the infrastructure, the more likely it is to be deteriorating. Different materials, with increasingly shorter useful lives leave us in the position where 100 years' worth of infrastructure is being exhausted all at once. As a consequence, municipalities now face a confluence of deterioration of the underground pipes, and, in some cases, the treatment facilities, that process the nation's drinking water and sewerage.

And thirteen years later, a growing threat expands the size of the funding gap: the challenge of climate change, demonstrated only too dramatically by more frequent extreme weather events such as Hurricane Sandy and the persistent drought that has gripped Texas and other states. A 2009 assessment indicates that the nation's drinking water and wastewater agencies will face a high price tag, likely soaring to \$1 trillion over the next 30 years, if they are to achieve required levels of improved resiliency.

The lack of federal funding continues to be extremely hard on public water and wastewater utilities, which now shoulder approximately 97% of the costs of clean water projects and face a backlog of over \$40 billion in local clean water infrastructure projects. To make matters worse, increasing sums are going toward debt service as opposed to new infrastructure investments; a recent survey of public wastewater agencies, for example, shows they are spending approximately 26% of their annual operating budgets to service their debt.

Yet clean water utilities have raised rates by more than double the rate of inflation over the course of the last ten years. As a result, 40% of households across America are today paying more than 2% of their median household income, the amount USEPA says is affordable, for wastewater charges. Given the current economic situation with stubbornly high unemployment and poverty rates, utilities are hard-pressed to ask ratepayers to pay even higher rates.

It is against that background, we respectfully contend, that the panel should assess the potential for P3s to assist our water and wastewater utilities as they wrestle with their daunting financial challenges.

## **II. DISCUSSION**

### **A. P3s: AN OVERVIEW**

P3s are contractual agreements between government agencies – in the US, a federal, state or local agency – and private entities. The National Council for Public-Private Partnerships, a US-based non-profit P3 advocacy group, provides the following P3 definition:

A Public-Private Partnership (P3) is 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.

The public and private entities work together to provide a government service, typically infrastructure-related utilities such as water, sewer and solid waste projects. P3s are also being used increasingly on toll roads, light rail, bridges, city halls and other civic centers, and stadiums throughout the US. Collectively, the public and private entities supply a public service that previously had been provided exclusively by the government. The cooperation of the public and private entities results in increased private sector participation in the financing and delivery of infrastructure projects.

Generally, this model involves the private sector taking on additional project risks, such as design, finance, long-term operation, or maintenance. P3s are utilized for a variety of reasons, including the monetization of the value of existing assets and the development or expansions of new and existing facilities. While P3s offer the public agency many advantages, the public sector must identify a revenue source for the project to provide a return on the private partner's involvement, and must ensure that the public's goals and interests are adequately protected.

P3s in the US vary widely based on the industry sector and type of project. Varying state legislative and regulatory frameworks influence the mechanics of each project and because of this, no two projects are the same. Likewise, P3s in the US frequently differ from those in other countries, which are also based on differing legislative systems. In this regard, the P3 definition in the US is broader than the generally accepted P3 notion abroad. For example, US public agencies typically consider both contracting for operations and maintenance and arrangements involving the design and construction of a project by a single contractor (design-build) to be P3s. Outside of the US, these are not frequently included in the P3 definition.

While P3s have changed the way that much of the world approaches large-scale infrastructure projects, the US has been slower to catch on. Recently, however, P3s have gained more traction in the US: between 1998-2007 and 2008-2010, the use of P3s to deliver and finance US infrastructure projects increased fivefold.

The development of P3s in the United States has evolved primarily at the state level, shaped by the laws, regulations and political influences of state and municipal legislatures and councils. One fundamental consideration cannot be overstated: the procurement laws regulating P3s vary considerably from state to state. But because procurement practices and project delivery methods are generally dictated by the state, the legal authority for P3s varies widely throughout the US. While some states have adopted broad P3 legislation, others have not yet implemented any form of P3s. However, even when broad statewide authority does not yet exist, the legal framework in some states allows for the use of alternative project delivery methods on a more local level.

The US legal framework for P3s is derived both from the statutory and local authority. On the state level, the laws and regulations adopted by the state legislature dictate the general statutory framework towards P3s within each state. On the local level, P3 authority may be

gleaned from local charters, articles of incorporation, ordinances or by-laws. A municipality's legal authority to engage in a P3 may also be the product of home rule authority or special legislation obtained on the state level.

Moving into the P3 realm and away from the traditional bidding model, a best value procurement process is utilized. Under best value procurements, the issuance of a request for proposals (RFP), and sometimes a request for qualifications, is used to solicit proposals. The proposals are evaluated based on factors such as qualifications, technical ability and business capabilities, rather than price, allowing the public entity to select a service provider that submits the most advantageous proposal. The public and private parties then negotiate the contract.

## **B. FORMS OF P3s**

In the US, as is the case worldwide, there are many forms of P3s. Not all types of P3s, however, are permitted in all states, and some states do not allow P3s at all. The following is a brief description of the most prevalent types of P3s being utilized in the US.

### **1. Contract Operation**

Many public entities in the US transfer responsibility for services they would typically perform to the private sector for technical, management and financial expertise and cost savings to the public entity. Such an arrangement can provide immediate savings to a public entity by eliminating rising pensions and healthcare costs associated with public employees. This type of arrangement ranges from a typical service contract where only a particular service is provided to Operation and Maintenance (O&M) contracts, in which a private entity operates a publicly owned asset for a specified term. Under an O&M contract the ownership of the asset remains with the public entity. As described above, the international community generally does not consider O&M contracts to be within the range of P3s and consider such contracts to be service contracts only. In the US, however, these contracts, O&M contracts in particular, form the most basic framework of P3s, and the use of the contract operation model is common in the US water and wastewater arena.

## 2. Design-Build (DB)

Under a design-build (DB) contract a single entity is responsible for designing and building an improvement or new facility and is accountable for all results through acceptance. The design-builder assumes the responsibility for the design work and all construction activities, together with the risks associated with providing these services, for a fixed fee. The project owner will typically retain the responsibility for financing, operating and maintaining the project in DB contracts. This delivery method provides a single source guarantor for design and construction of the entity. The public entity does not separately retain or manage a design engineer or general contractor for construction. Importantly, performance and business risks, such as cost overruns and construction delays, are transferred to the private entity. Our team has had experience with a number of these transactions and have participated in several of them in recent years.

## 3. Design-Build-Operate (DBO)

Under a design-build-operate (DBO) contract, a single contract governs the design, construction, and operation of a capital improvement or public infrastructure asset. Title to the asset will typically remain with the public entity; however, alternate forms of this P3 structure may vest title with the private party. The public sector secures the project's financing and retains the operating revenue risk and any surplus operating revenue. The maintenance and repair obligations remain with the public entity under this contractual arrangement. Bringing the design, construction and operation aspects of the project under one contract, can lead to various operational efficiencies. For instance, the project design can be tailored to the construction equipment and materials that will be used to operate the facility. Our team has also had experience with a number of these transaction.

Our Municipal Infrastructure Team is especially proud of its representation of the Rockland County Sewer District No. 1 in Rockland County, New York. The District successfully undertook the development of an advanced wastewater treatment plant on a design/build/operate basis, which was the first municipal wastewater design/build/operate project in New York. This \$45 million dollar state-of-the-art facility treats wastewater to near drinking water quality standards to recharge the sole source aquifer serving the region, while providing schedule, operation and

price guarantees, and it continues to provide substantial operational and service benefits to the Sewer District.

#### 4. Design-Build-Finance-Operate (DBFO)

The design-build-finance-operate (DBFO) project delivery method combines the responsibility for the design, finance, construction and operation components of a public project into a single contract that is transferred to a private entity. The private sector typically operates the infrastructure asset pursuant to a lease or operating agreement for a sufficient period of time to recoup its financial investment in the project plus a profit. While there is great variety in the various DBFO arrangements in the US, one commonality is that they are financed either partly or in whole by debt leveraged revenue streams related to the project such as tolls or user fees. The capital and project development costs are funded by the issuance of bonds or other debt that is leveraged against future revenues. Here, once again, title to the assets remains with the public entity.

#### 5. Concession Agreements

Concession agreements involve a long-term lease arrangement for existing, publicly financed assets to a private entity concessionaire for a certain period of time in exchange for an upfront payment to the public entity. The public entity transfers the right to operate and maintain a facility or asset to the private party, which then operates the assets or becomes an exclusive provider for a designated service area. Frequently, the concessionaire is required to make improvements to the asset as part of the deal. The concessionaire recoups their investment over the term of the lease through fees assessed on the users and decreased operational costs from efficiencies created by the private entity's operation of the asset. Concession agreements provide a public entity with an immediate monetary infusion in exchange for the long-term operation of the public asset. Recently, several notable concession transactions have taken place in the water and wastewater sector, occurring in Bayonne, NJ, Allentown, PA, and Rialto, CA.



### **C. The Benefits of P3s**

P3s provide an array of benefits to local governments that have increased their prevalence throughout the United States. Most importantly, this contractual arrangement offers local governments the benefit of involving a private entity to deliver a product more efficiently, more cost-effectively, and with improved service. Frequently, the private entity was created to provide a particular service – whether it is a water company, solid waste company or transportation company – and thus has the expertise to improve the operational efficiency for that service. This expertise translates into the potential for lower overall project costs and faster project delivery than when compared with traditional low bid construction.

Typically in the US, governments are statutorily required to utilize traditional project delivery methods such as “design-bid-build” (DBB) for public construction projects. Under DBB, a public entity contracts separately with an engineer to design the project and a contractor to construct project. The public entity’s selection is based on the lowest cost bid from a responsive and responsible bidder. In this scenario, the public entity or private company may operate and maintain the facility, while the public entity maintains ownership of the facility.

However, P3s enable public entities to undertake “best value” procurements whereby governments are able to obtain the best contractual arrangement and the best company or vendor to provide a service. Selections are not on a low bid basis, but rather on the overall best value to the public entity. Such project delivery methods allow the public entity to consider factors that optimizes quality, while incorporating cost, efficiency, price and performance criteria resulting in the best overall value for the public entity. Thus, P3s do not face the issue of quality associated with accepting a low bid.

P3s provide additional benefits to public entities through various guarantees – guaranteed costs, guaranteed schedules, and guaranteed performance. Cost overruns and delayed project completion dates plague infrastructure projects in the US. P3s, however, remedy this problem by providing predictable future costs that are specified by contract. A P3 may be conducted under a “fixed price guarantee,” in which a contractor is paid a certain price for the work regardless of any delays or cost increases associated with the project. Under this arrangement, the contractor agrees to accept the risk associated with fluctuating input prices and delays encouraging the contractor to complete the project on time and on budget.

Two other construction pricing structures, “cost-plus pricing” when the contractor is compensated for actual costs incurred plus a fixed fee, and “guaranteed maximum,” in which the contractor is compensated for actual costs incurred plus a fixed fee subject to a price ceiling, provide additional pricing schemes with varying degrees of risk shifting and guaranteed costs for the public entity. These cost structures also reduce the potential for change orders arising out of the project.

P3s also offer public entities guaranteed construction schedules that ensure a public infrastructure project is delivered on time. A single entity that is responsible for the design and construction of an infrastructure project is better able to manage the construction timeline and accept the risks associated with guaranteed schedules. If a project experiences delays, liquidated damages and other remedies may be available to the public entity. On the other hand, performance incentives for early completion may be negotiated further encouraging on time and early project delivery. Thus, P3s provide guaranteed schedules and construction timelines that are often shorter than projects delivered using the traditional DBB method.

Although little empirical evidence is available on the efficiencies of P3s, because they are typically long-term contractual arrangements, some studies demonstrate that P3s do achieve efficiencies when compared with traditional project delivery methods. One study of United Kingdom P3s in 2009 found that 65 percent of construction projects were completed at the contracted price, while only 54 percent of public construction projects were delivered on budget. In addition, an Australian study of 21 P3s and 33 traditional projects since 2000 revealed that a typical P3 project had only about 1 percent cost overrun on average, compared with nearly 15 percent average cost overruns for traditional procurement projects.

Moreover, P3s allow for guaranteed performance standards atypical of projects procured by traditional methods. A single source provider of design, construction and even the operational components of a project allows for an increased level of responsibility and risk acceptance that ensure a project is delivered to specification and fully operational. The one responsible entity cannot claim that a design flaw resulted in some aspect of the project not working properly. Because they designed it, it falls on them to repair. This results in a guarantor of performance and less potential for claims or litigation arising out the project.

P3s also provide clear risk allocations. The basic risk framework utilized in the US is that the private entity assumes the performance risk, the design and construction risk, the risk of completing the project on time, the risk of obtaining certain construction permits, and frequently if operation is part of the P3, the risk to obtain the operational permits. In addition, in truly privately financed projects, certain financing risks are assumed by the private entity.

There are, however, certain risks that the market is less likely to assume either because they lack the capacity to appropriately handle the particular risk or because the public entity is in a better position to maintain that risk. For instance, subsurface risk and risks associated with regulatory agencies are typically maintained by the public entity in the US because they are usually in a better place to know of such risks and in a better position to manage various regulatory requirements than a private entity. Notwithstanding the typical risk posture discussed above, sometimes a public entity may want the private entity to account for these types of risk, and for the payment of a risk premium, the private entity may agree to assume it.

Finally, the most important reason public entities in the US are turning to P3s is that they offer public entities with increased access to capital to complete necessary infrastructure projects. Facing increased fiscal constraints, US public entities are relying more frequently on the ability to amortize the cost of infrastructure projects through revenue streams created by the project, rather than committing to large upfront payments of public funds. This is especially true as utilities steadily engage resource recovery opportunities, such as the generation of power from biosolids and the pelletization of sludge for beneficial re-use. The ability to spread the project costs over time or onto private entities makes undertaking such projects more palatable to both the public entity and the taxpayers who would traditionally pay for the infrastructure improvements.

### **III. CONCLUSION**

As water and wastewater utilities in the United States continue to confront the infrastructure finance gap, the use of P3s is likely to become more prevalent throughout the country. Congressional action or changes to federal policy are not required, however, for this to occur. Change is required, instead, at the state and local levels.

State change will generally involve legislative action that expands legal authority to allow or expand the use of P3s. Public water and wastewater agencies and an array of advocacy groups can be expected to continue the fight for that legal authority given the capacity of P3s to offer more efficient operations, greater cost-effectiveness and improved service. The innovative financing mechanisms that P3s can provide will only enhance that likelihood.

The change required at the local level is probably best described as attitudinal. There is a certain safety in the public sector in conducting business in the usual way, which means continuing along the traditional DBB procurement path, and it is sometimes difficult to deviate from a bureaucratic norm. But as knowledge of P3s grows and examples of their successful use increase, that local change is likely to occur, a prospect enhanced by the industry trend whereby public water and wastewater utilities are increasingly operated to align with the disciplines of a private business model.