Alternative Financing Mechanisms Offer Relief for Infrastructure Projects in Tight Fiscal Environment

Teno A. West — May 29, 2012

Throughout the United States, municipalities of all sizes face the daunting task of upgrading and modernizing their antiquated water and wastewater systems. A recent Environmental Protection Agency (EPA) study estimates that U.S. municipalities will need to invest more than $300 billion over the next 20 years for wastewater treatment systems to repair years of neglect. In fact, the EPA study predicts that the state of New York alone must spend roughly $30 billion to fix its aging wastewater systems. From coast to coast, municipalities are facing a fiscal crisis resulting from declining tax revenues, increased expenses through rising pension costs and other state mandates, and are extremely restricted in how they can spend their available resources.

Luckily, several innovative financing mechanisms are available to fund the necessary water and wastewater system improvements. For one, alternative project delivery methods, such as design-build-operate (DBO), provide inventive and cost effective means to deliver water and wastewater infrastructure projects. In addition, the privatization of the operation and maintenance aspects of water and wastewater systems, or the monetization of the entire system, can provide municipalities with further cost savings.

The Rockland County Sewer District No. 1, located in Rockland County, New York, as part of a $125 million sewer expansion project, recently completed a $46.7 million advanced wastewater treatment plant that has produced effective results and substantial financial savings. The district utilized the DBO method in the development of the Western Ramapo Advanced Wastewater Treatment Plant (AWWTP), the first municipal wastewater DBO project in New York. The AWWTP extends sewer services into the western portion of the town of Ramapo, New York, an area previously served by independent subsurface disposal systems. There, wastewater is processed and treated to near drinking water quality so that the effluent derived therefrom may be acceptable for recharging the Ramapo River Watershed. The AWWTP has a design flow of 1.5 million gallons per day (mgd), and the collection system includes

four pumping stations, 119,000 lineal ft of gravity sewers, 37,000 lineal ft of force main, 20,600 lineal ft of low pressure main, 9,600 lineal ft of diversion force main and 790 manholes.

Facing deepening fiscal restraints, a concerted effort was made to design and construct the AWWTP in an efficient and cost effective manner. The district explored numerous financing and project delivery methods, including both traditional construction methods and DBO. After considering the many advantages offered by the DBO method – in terms of cost savings, construction timing and minimizing the district's risk – the district chose to pursue DBO. However, New York generally does not allow for the use of DBO on wastewater infrastructure projects. To utilize this advantageous project delivery method, the district, through their legal counsel, drafted special legislation that authorized them to issue a request for proposals (RFP). This would allow them to enter into a contract with a private company using the DBO process for the wastewater treatment plant in Rockland County, at the request of the county, which the State Legislature adopted pursuant to the Municipal Home Rule Law.

Pursuant to its special authorization, the district issued a RFP and received proposals from three interested parties. After an exhaustive evaluation process, the district entered into a DBO contract with Veolia Water North America (Veolia) to design and construct the facility, and to operate, maintain, repair, replace and manage the AWWTP for five years after it became operational. Contract safeguards for the district included guaranteed design-build performance including a scheduled acceptance date, guaranteed performance standards, a fixed design-build price and service fee, a corporate guarantee from the parent entity and liquidated damages for non-performance.

The DBO method produced significant cost savings for the district compared with anticipated project costs using the traditional design-bid-build method. In addition, the district utilized low cost State Revolving Fund (SRF) proceeds to finance most of the project. In doing so, the district was able to save millions of dollars in interest payments compared with regular municipal tax exempt financing options. Moreover, by privatizing the operation and maintenance of the AWWTP, and utilizing the specialized and experienced employees of Veolia, the district was also able to obtain significant cost savings moving forward. Overall, the use of these funding mechanisms allowed the district to improve the wastewater system during this tough financial climate.

As the AWWTP demonstrates, alternative project delivery methods can provide cost effective means to deliver water and wastewater projects on time and on budget. Under the DBO concept, a single entity is responsible for designing and building an improvement or new facility, and operating the facility once it is functional. Importantly, the single entity is accountable for all results through acceptance of the project by the public owner, effectively shifting much of the project risk to the single source entity. Specifically, the private entity often assumes the technical, environmental and business risks associated with the project. Moreover, with the similar design-build-finance-operate (DBFO) method, the private entity is also required to finance the project, placing the financial risk on the private party, thus alleviating that burden from the municipality altogether.

The DBO method offers project owners many benefits including cost savings typically amounting to 15-30 percent, competition on design and operation, a cooperative relationship between designer, builder

and operator, and guaranteed performance. The statutory authorization to utilize DBO methods for water and wastewater projects vary from state to state; however, its use is becoming more prevalent nationwide. Notably, SRF proceeds can be, and often are, used in conjunction with these cost reducing project delivery methods, providing additional project savings.

In addition, a municipality can combat the financial difficulties it faces with upgrades and improvements to their water and wastewater systems through the privatization of the systems' operation and maintenance. Privatized operations offer specialized employees with extensive knowledge of the particular technologies employed at a given facility. Private employees may also be better suited for facility operations where specialized training and 24-hour staffing is required. Moreover, private operation avoids the need to add public employees to the municipal payroll, saving on the salaries, benefits and rising pension costs that are crippling municipalities throughout the U.S. The privatization of the operation and maintenance for water and wastewater systems offers municipalities another effective mechanism for cost savings.

Traditionally, municipal bonds and SRF funding provide the needed capital to fund water and wastewater improvements. However, while municipal bond interest rates remain low, the availability of SRF funding is declining. In light of this situation, another possible cost-cutting mechanism involves the privatization of water or wastewater system assets through a monetization transaction, usually involving a sale or long-term lease. Under such a transaction, the municipality is frequently offered a large, upfront cash payment in exchange for granting a concession to a private party who will then operate the system. The private party may be able to run a system more efficiently than the public entity and achieve higher environmental standards.

Privatization is a trend worth watching as several communities nationwide are exploring this financing option.

The AWWTP project demonstrates that even while facing a tightened fiscal environment, municipalities can continue to make the required investment in deteriorating water and wastewater systems. Through such mechanisms as alternative project delivery methods and the privatization of water and wastewater systems, municipalities can discover financial relief while addressing needed system improvements. During these tough financial times, municipalities should continue to explore these types of innovative funding and cost saving mechanisms to provide the necessary investment in our aging water and wastewater systems.

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