Bidding O&M with Construction

Traditionally, utility owners have retained the role of operating and maintaining a facility once water-capital projects have been constructed. The utility typically has on its staff trained operators and maintenance personnel who possess the education, training, and required state certifications to run water plants and support facilities like wellfields, pumping stations and distribution systems.

In the last 10 years budgets have shrunk; therefore, maintaining staff internally to run these operations has become increasingly difficult for owners. Increasing labor costs like salaries, training, retirement, and insurance benefits have forced utilities to look at privatizing some of their operations and maintenance (O&M).

The systems in the water supply field that involve equipment, controls and facility management have become increasingly complex. Some functions can be performed only by a specially trained work force. Bidding operations and maintenance of facilities along with the capital construction contracts is a relatively new approach in the U.S. water market.

In conventional design-bid-build contracts, operations and maintenance can be contracted to the builder via the construction contract. Similarly, in design-build contracts, the agreement can be structured to include operating and maintaining the facility. In some cases, the utility has qualified staff that can operate the facility but will need technical expertise and equipment maintenance support during the initial years of operation. In those instances, services after start-up will be limited to periodic maintenance.

This approach is one way to progressively train the owner’s staff in maintaining the facility and allow them to gain expertise to operate the facility efficiently over time. The transition time can be structured based on the complexity of operating and maintaining the facility, as well as the skill and the levels of expertise of the owner’s staff.

O&M can be included in the construction contract in several ways. A common approach is to identify a supplier or an entity in a conventional construction contract to extend operations and/or maintenance services through a period of time—typically one or two years.

O&M may run concurrent to equipment or system warranty periods and could be covered by the contractor’s performance and payment bonds. This approach offers a financial backing to the utility to ensure that the supplier or entity assigned performs the service in accordance with the terms of the contract.

In some cases, operations and maintenance can be included in a design-build type contract where the design, construction, start-up, operation and maintenance of the facility are contracted to a single entity for an extended period of time. In this approach, a performance type contract is executed between the utility owner and the builder. The builder operates the facility and assumes responsibility for all maintenance until the contract expires and operation of the facility is transferred to the owner.

In this approach, the builder assumes most of the risks of operation and maintenance for a fee or a share of the revenues and provides bonding and insurance to the owner during the life of the contract. This is of value to owners who do not want to assume extended labor costs to maintain a facility.

In Florida, examples of utilities that have tried this approach are Tampa Bay Water, the city of Hialeah, and the Miami-Dade Water and Sewer Department. Tampa Bay Water has used the design-build-operate contract approach to run two of its water plants. Hialeah currently is in the process of selecting a builder to construct a 4-MGD membrane water treatment plant to treat water from the Floridan Aquifer in South Florida. The city will enter into a 20-year contract with the builder to operate and maintain the facility in a joint ownership agreement with Miami-Dade County.

The Miami-Dade Water and Sewer Department currently is constructing an on-site sodium hypochlorite generation facility at its South District Wastewater Treatment Plant in Black Point. The facility maintenance is contracted to the supplier of the generation system via the construction contract for two years after construction. During this period, the Department will train its staff to maintain the system, and then assume full control.

The strategy of including operation and maintenance in construction contracts is becoming popular among utility owners as systems become more complex and labor-intensive to operate and maintain. Issues that both owners and contractors need to understand include developing procurement strategies for equipment, vendor qualifications to run systems, performance requirements