



Procurement of Valves and Specialized Equipment

Engineering and Operations Committee

Item 6a

October 9, 2017

Specialized Equipment

- High horsepower pumps & turbines
- Large diameter isolation valves
- Control valves
- Filter valves for treatment plants
- Treatment process equipment
- Large transformers
- High voltage switchgear
- Control & protection relay panels

Strategy for Equipment Procurement

- Metropolitan-furnished – typical approach for specialized eqpt.
 - Metropolitan contracts directly with manufacturer/vendor
 - Metropolitan steps include
 - Prequalification (when needed)
 - Bidding & award in advance of construction
 - Oversight of manufacturing/delivery process
 - Furnishing eqpt. to contractor for installation
- Contractor-furnished – typical approach for standard, readily available eqpt.
 - Contractor issues purchase order to vendor
 - Contractor steps include
 - Procurement of eqpt. that meets specs
 - Preparation of technical submittals for Metropolitan approval
 - Mgmt. of all contractual, suitability, financial, delivery & warranty issues with vendor

Advantages and Disadvantages

Metropolitan-furnished eqpt.

- **Pros:**

- Metropolitan controls the selection process
- Focuses on quality, durability & reliability
- Adaptable to market conditions & non-standard commercial terms

- **Cons:**

- Overall project schedule may be lengthened
- Metropolitan is responsible for delivery risks
- Potential for claims by installation contractor

Contractor-furnished eqpt.

- **Pros:**

- Cost-effective for standard equipment
- Contractor is responsible for all aspects of providing eqpt. that meets specs

- **Cons:**

- Contractor focuses on low cost
- Disputes may result in significant cost & schedule impacts

Need for Specialized Equipment

- Metropolitan's system is designed for reliability & flexibility
 - Original eqpt. is often specialized & unique due to size, pressure, or operating conditions
 - High reliability is needed to avoid expensive & disruptive unplanned shutdowns
- Original eqpt. is reaching end of service life
 - Increased frequency of repairs
 - Lack of spare parts

Challenges – Market Issues

- Many manufacturers have consolidated or been acquired, reducing competition
- Many remaining manufacturers have modified their business models:
 - Standard, off-the-shelf designs based on lower-capacity units used by most of water industry
 - Less interest in high-risk, custom designs for a small number of units
- General reduction of manufacturing capacity & expertise in U.S.

Challenges – Technical Issues

- Closely aligned with market issues
- Metropolitan's need for robust & reliable equipment leads to highly detailed specifications:
 - Material selection
 - Coatings and linings
 - Maintainability
 - Ability to repair in place
- Increasing trend on procurement bids:
 - Many “no-bids” from manufacturers
 - Only a single bid that meets the technical reqmts.

Challenges – Commercial Issues

- Fewer manufacturers are U.S.-based
- Foreign & U.S. firms often take issue with standard terms:
 - Performance bonds
 - Warranty periods
 - Design & manufacturing experience reqmts.
 - Payment schedules
 - Indemnification terms
 - Insurance & worker's compensation
 - Liquidated damages
 - Maintaining confidentiality of proprietary data
- On occasion, Metropolitan negotiates some terms

Example – Large Diameter Conical Plug Valves

- Procurement upcoming for twelve 54-in diam. valves to replace isolation valves on the Second Lower Feeder
- Valves to be furnished to contractors for installation in several reaches
- Robust, heavy duty for high pressure application
- Existing valves will be refurbished at La Verne Shops for future use
- RFQ 1105 issued in 6/17 to prequalify manufacturers:
 - **Two responses**
 - One meets technical reqmts.
 - One does not have experience with large valves
 - A 3rd manufacturer did not respond – will not deviate from standard product line
- Staff are assessing options & will provide a recommendation in early 2018



Other Upcoming Specialized Eqpt.

- Filter valves for Weymouth plant
- Discharge valves for CRA pumps
- Isolation valves for Sepulveda Feeder
- Power transformers for CRA pumping plants
- Programmable Logic Controllers (PLCs) for Metropolitan's control system upgrade

