

SEIZING THE INITIATIVE: HOW STATES CAN HELP THEMSELVES IN REHABILITATING UNDERGROUND WATER INFRASTRUCTURE

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Faced with the rapid deterioration of their underground water networks, state and local governments are seeking to make the best use of their limited funds to ensure that their constituents are served with a safe and affordable water supply.

In a 2010 report, the U.S. Conference of Mayors projected that, over the next 20 years (2009-2028), \$3.8 trillion will have to be spent rehabilitating the nation's water and wastewater systems. According to the U.S. Environmental Protection Agency (EPA), underground pipes account for 60 percent, or \$2.28 trillion, of that total. In short, corroding and leaking pipes are the big problem, and they should be the focus of policymakers' attention.

A NATIONWIDE PROBLEM

The American Society of Civil Engineers estimates that there are 240,000 water-main breaks in the United States each year. This represents an enormous cost to ratepayers and taxpayers, because the lost water never reaches the homes and businesses it is supposed to serve. In Lake Havasu City, Arizona, for example, a ductile-iron pipe serving the city's wastewater treatment plant burst in late December, causing the underground line to collapse and to fill with sand, rock, and dirt. Repairing the damage will cost the city an estimated \$85,000.

Bigger cities face even more daunting problems. Work crews in Los Angeles have responded to some 13,000 leaks in the city's water system since 2006. LA officials have a \$1.3 billion plan to replace 435 miles of deteriorating pipe over the next ten years, but they have no idea how they are going to pay for it.

Efforts to upgrade underground piping systems and to protect the public from contaminated water are often thwarted, however, by antiquated procurement policies. The rapid pace of technological innovation can render even the most advanced procurement specification obsolescent within a few years. Specifications that effectively exclude high-quality and cost-effective products and technologies from the bidding process work to the detriment of water systems and taxpayers. By removing these barriers to entry, public officials can allow their communities to benefit from open competition from the most qualified of suppliers.

STATE LEGISLATURES GET INVOLVED

Lawmakers in Indiana, Ohio, Arkansas, and North Carolina have considered, or will soon consider, legislation providing for competitive bidding on water and wastewater projects. While the wording of the bills differs somewhat from state to state, what they have in common is that they simply require that all piping materials meeting the specifications of the American Water Works Association (AWWA) and the American Society for Testing and Materials (ASTM) as well as those of the identified project be included in the bidding process in projects supported by federal State Revolving Funds (SRFs). The bills do not mandate the use of any particular piping material, nor do they restrict the ability of a project engineer to use any piping material that meets specifications.

DUBIOUS “ENGINEERING” ARGUMENTS

These legislative initiatives to remove barriers to competitive bidding have encountered resistance from critics, who claim that the procurement reform would unduly complicate the task of engineers overseeing pipe-replacement projects. John A. Hardwick, chair of the Water Utility Council at the American Water Works Association, says the legislation introduced in Indiana, SB 68, will mean that the “decision on what piping material you specify will be taken out of you (sic) and your engineer’s hands. “Local government units,” he adds, “will incur increased costs, project delays, bidding confusion, and loss of decision-making ability if SB 68 is enacted.”

Writing in opposition to Ohio’s open-competition bill, HB 417, Steve Stolte, Union County Commissioner, says that, “Ohio law is not the place to establish engineering standards. Engineering standards should be established and selected by engineering and other technically minded professionals representing local government agencies.”

In testimony submitted on behalf of the Ohio Society of Professional Engineers (OSPE), Joe Warino, OSPE’s vice president of legislation and government affairs, said that HB 417 “would diminish the recommendations of a registered professional engineer (PE) that may specify a particular type of pipe or pipe product based on factors not limited to soil conditions, strength of materials, stress or strain calculations, corrosiveness, etc.”

Officials in jurisdictions where competitive bidding has been adopted have not encountered such “engineering” problems. “A lot of time the engineer is the problem,” explains Jon Russell, director of the American City County Exchange and a Town Councilman in Culpeper, Virginia, a city of 17,000 located 70 miles southwest of Washington, D.C. “Some of them want to stick with what they know and are reluctant to try anything new. They are creatures of habit” he says. Russell also disputes claims that fair and open bidding leads to higher costs. “Culpeper’s taxpayers could have saved \$10,000-\$20,000 if we had adopted competitive bidding a few years earlier,” he adds.

Russell’s comments are echoed by Jeff Clawson, city manager of Princeton, Illinois. Princeton is sending out bids for a new water main construction project and is letting suppliers of both ductile-iron and polyvinyl chloride (PVC) pipes compete for the contract. Clawson says he has never had an issue in his career with the use of PVC pipes and that the costs “will speak for themselves.” A few years ago, the city council of Duncan, Oklahoma, population 23,500, also voted unanimously to allow competitive bidding in its underground water pipe projects. In both cases, local utility engineers opposed the idea, but elected officials decided instead to act in the best interest of taxpayers.

Indeed, Indianapolis has been a leader in adopting procurement reform that allows for a thorough review of piping alternatives when dealing with the city’s underground water networks. According to a 2012 assessment by Mayor Gregory Ballard, the use of “non-corrosive materials is crucial to keeping long-term maintenance costs down and minimizing capital-replacement budgets.”

“The traditional habit of using one or two pipe materials exclusively is no longer satisfactory,” adds Schenectady, NY Mayor Brian U. Stratton, former co-chair of the U.S. Conference of Mayors Water Council. “Local officials need to compare all proven pipe materials on a life-cycle basis before choosing the best pipe for the city.”

SUCCESSFUL USDA PROGRAM

Since the 1970s, the U.S. Department of Agriculture (USDA) has spearheaded efforts at the federal level to bring about procurement reform in the area of underground water networks. USDA’s Rural Utilities Service (RUS) provides funding for water systems in rural communities across the country. Recognizing that its funds are limited, USDA’s policy is to foster competition among suppliers.

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In an internal memorandum dated March 16, 2002, which was forwarded to state directors for rural development, the USDA stated, "All procurement transactions regardless whether by sealed bid or negotiation and without regard to dollar value, shall be conducted in a manner that provides maximum open and free competition." The memorandum further specified:

"RUS expects the owner and the design engineer to be open to reasonable alternatives in the facility planning process. Contractors, manufacturers, and suppliers with acceptable equipment and materials should be given a chance to participate in the project. Once the facility requirements have been established that assures good quality, the goal is to construct the project at the best price for the system and the taxpayer."

USDA is pleased with the results of its policy. "The purpose of an open and free competition policy is to ensure that the rural communities we serve have affordable, quality options when building out their water and wastewater service," says Ben Shuman, senior engineer, Rural Utilities Service, with USDA's Water and Environment Program. "Most rural communities have limited resources and have to get it right the first time. As with any regulation or process, participants may have issues. Sometimes engineering firms object to the open and free competition policy because they may prefer to select a particular brand-name product they are familiar or comfortable with in regards to engineering performance. Sometimes manufacturers want their product named in the technical specifications and raise objections if engineers do not specifically list them due to our policy."

Shuman points out that, "Some applicants or local governments have preferences for specific materials whereas our policy requires a consideration of alternatives. In the end, ensuring that rural communities are able to see the options available to them allows them to make better decisions and provide the best service they can to those who live and work in rural America."

NORTH CAROLINA JOINS OHIO AND INDIANA IN OPENING A NEW CHAPTER

USDA's program has run smoothly for well since the 1970s and appears to have encountered no "engineering" problems throughout its existence. Indeed, the benefits of competitive bidding – whether at the federal, state, or local level – are beginning to resonate around the country.

On March 25, SB 397 was introduced into the General Assembly of North Carolina. In the spirit of open and fair competition, its wording is straight to the point: "A public entity shall not prefer one type of acceptable piping material over another in studying, planning, designing, constructing, developing, financing, maintaining, rebuilding, improving, repairing, procuring, or operating a water, wastewater, or stormwater drainage project that is funded in whole or in part by State funds unless sound engineering practices suggest that one type of acceptable piping material is more suitable for a particular project."

Ohio, Indiana, and North Carolina now have the opportunity to open a new chapter in rehabilitating the state's underground water networks. In fact, the Arkansas Senate passed a competitive-bidding bill, SB 540, March 25 by a whopping 31-1 margin. And while the legislation failed to be approved by the House before the legislature adjourned, the bill is certain to be reintroduced next year.

Lawmakers and other elected officials understand that competition leads to lower costs, and the money saved in one project can be applied to other projects. It's a win for taxpayers, a win for ratepayers, and a win for everyone wanting access to a safe and affordable water supply.

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