ROLL CALL

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Getting the Best Bang for the Buck in the Nation's Infrastructure

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The president's call for $50 billion in stimulus for the economy can be good news for a major long-term infrastructure crisis facing the nation as long as crucial legislation is enacted to ensure that procurement rules prevent the money from leaking out of the system like water escapes our corroding pipes.

Lawmakers have received earfuls from angry constituents this year on everything from health care to unemployment to immigration. But as the cold, winter months approach, they are likely to face more anger and frustration back home from constituents paying the price for the nation's old and deteriorating underground infrastructure.

There are 700 water main breaks each day in North America, costing more than $9.5 billion in repairs since 2000 (see watermainbreakclock.com). Many more are due this winter, and legislators are faced with the dilemma of how best to address the problem. The good news is there's a good-government, bipartisan way to ensure that public dollars are spent wisely, economically and effectively.

All of those goals can be achieved through the procurement process for the pipes used to carry our nation's water.

While piping is rarely seen by the public, its effect on budgets is significant. Investment in electricity, water, sewer and transportation infrastructure - all of which is expiring simultaneously - will require $6.5 trillion over the next 25 years. Of that, water and sewer lines alone will need from $660 billion to $1.1 trillion over 20 years.

Out of all of those investments, pipe represents the single largest component of a utility's infrastructure assets and significantly affects operations and maintenance costs, which are increasing by 6 percent annually above the rate of inflation.

Moreover, out of all the mounting difficulties, corrosion represents the single largest component of the problem.

This leads to a virtual flood of wasted water. In Detroit, 35 billion gallons leak from the water system each year, leaving residents to pay more than $23 million annually for water that never reaches their home. In many major cities, it is common to see 1,000 water main breaks each year. In all, leaking pipes lose an estimated 2.6 trillion gallons of drinking water every year - the equivalent of 17 percent of all water pumped in the U.S.

That's not sustainable, and it's certainly not due to a lack of options.

One pipe solution already exists and has been available for decades. PVC pipe has been used in America since the 1950s, and according to the Environmental Protection Agency, plastic pipe has an unsurpassed resistance to corrosion. Since then, PVC has rapidly become vital to rural water and wastewater systems because it satisfies the need for tough, durable and corrosion-resistant pipe. Experience shows these pipes are not succumbing to the costly ravages of corrosion and deterioration.

The cost-effectiveness of PVC is also another key consideration. The annual savings derived from PVC pipe now used in sanitary systems in the U.S. is estimated at $270 million annually - a whopping $1.5 trillion over the next century. If we converted the entire sanitary sewer system to PVC, estimated savings could reach $800 million a year and as much as $4.5 trillion over the next 100 years. And don't forget the energy lost pumping water that currently goes nowhere; $4.1 billion is wasted on the energy that it takes to pump that unused water.

So why isn't it used more widely?

Old, outdated local procurement rules in many municipalities often ignore newer technologies like PVC. Prohibitive procurement is hindering the wider use of corrosion-proof materials like PVC. Often, the reasons cited are seeking to further "study" the material or a reluctance to try something new or even reliance on untrue myths.

Yet the technology has been recognized by all required state, national and international agencies and standards organizations and is used by thousands of municipalities worldwide.

Additionally, there's an important fiscal responsibility issue at play. When federal dollars are used, is it not reasonable to require updated guidelines to ensure that taxpayers get the most for their money?

The federal government has already signaled its interest in combating the problem. Regulation has tackled corrosion in the energy sector, with the Office of Pipeline Safety mandating tough requirements for corrosion protection on energy pipelines. Similar standards should apply for water and wastewater, and the federal government can play a leading role.

There is a solution that is actually quite simple and would meet good-government standards of our elected leaders by increasing transparency and open up the procurement process.

Federal legislators can take action by amending S. 1005, a measure currently before Congress designed to improve water and wastewater infrastructure. This bill should include stipulations to eliminate corrosions in piping systems, as well as improve their durability, minimize break rates, reduce operating costs and increase energy efficiency - surely all good goals.

By opening municipal procurement and ensuring that more competitive bidding is tied to federal funds for underground infrastructure, the U.S. will save hundreds of billions, if not trillions, of dollars. It would also pave the way to a truly sustainable economy, more efficient utilities and pipe networks with much longer life cycles.

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