

InstarAGF Asset Management

Bridging troubled waters — Private investors get involved in modernizing water infrastructure



Gregory Smith is president and CEO of InstarAGF, where he brings more than 20 years of experience in the investment, operation, acquisition and financing of private equity investments, including public and private infrastructure, real estate, power and utility businesses. Smith was previously managing partner and head of Brookfield Financial's Global Infrastructure Advisory Group. He also previously served as the president of Macquarie Capital Funds Canada Ltd., where he was responsible for the establishment, growth and operations of Macquarie's unlisted and listed funds business in Canada, along with the active management of Macquarie's Canadian assets owned by offshore funds.

Recently, **Chase McWhorter**, Institutional Real Estate, Inc.'s managing director, *Institutional Investing in Infrastructure*, spoke with **Gregory Smith**, president and CEO of InstarAGF Asset Management, about the private sector's role in modernizing, repairing and securing essential water infrastructure. An excerpt of that conversation follows.

Water is essential for our communities's survival. With demand projected to grow by 55 percent globally between 2000 and 2050, what impact do you see this having in infrastructure development and management?

Over the past century, water use has grown at a rate of more than twice the rate of population growth. By 2050, it is projected that 40 percent of the world's population will be subject to severe water stress. To meet this rapidly growing need, our current models of delivering water and wastewater will need to change.

According to the United Nations, about 80 percent of countries have insufficient funding to meet their requirements for water and sanitation, both in the developed and developing world. In addition to the significant social impacts, neglecting to address our water and wastewater needs can put more than \$40 billion worth of economic activity at risk. These systems have a profound impact on our communities and economy, making it crucial for us to look a little more innovatively at how we approach water supply and use.

We need to find new, sustainable approaches to future-proof our water resources. In particular, we need to do better at looking at water treatment and water distribution networks, addressing water-loss ratios within our existing distribution systems, innovating to save energy and exploring water recovery opportunities within bioenergy and anaerobic digestion (AD) technology.

With infrastructure investing becoming a more common addition to private sector portfolios, why aren't we seeing more investors addressing the need for financing in this sector?

A key challenge for private investment in water infrastructure has been cost recovery. Typically, the water costs that customers are charged barely cover operating costs. With additional infrastructure costs involved with designing, developing and maintaining water and wastewater systems, there is a gap between existing system charges

and cost recovery. For most systems this means that there is limited financing left to rebuild or invest in innovation looking forward. With government and private sector collaboration, the value of maintaining innovative, efficient water systems can be better realized.

Another major challenge is regulation. In certain jurisdictions, regulator support for new products and services has been an important driver of innovation, investing in technology to provide lower cost solutions. But often, regulatory environments are stuck operating within existing systems. They resist investing in innovative, long-term solutions, preferring to concentrate on capital costs today rather than new developments for the water and wastewater industry.

Social technologies emphasizing customer participation, for example, can be leveraged to better allocate water supply among vastly different users. Integrating these new systems can create opportunities for increased efficiencies and system reliability, changing how governments and utilities engage with consumers while moving towards decentralized systems focused on recycling water to drive increased security.

What is the private sector's role in addressing this innovation deficit in the water sector?

There is a lot of education that needs to go on within the water and wastewater sector.

Whether you are a Republican or a Democrat, more than 60 percent of the public in North America supports private investment in infrastructure, including water and wastewater infrastructure, but there is still a concern with ensuring these systems are regulated and properly managed. While this regulation and oversight is important to maintain a standard of reliable, efficient and sustainable systems, it can sometimes come at the cost of innovation and investment in new technologies.

As it stands, over the next 25 years there will be a \$1 trillion water infrastructure gap across the U.S. It's too large a gap for any one entity to address — there has to be more strategic collaboration and discussion around cost recovery, technology and innovation. Looking at North America, while we treat around 75 percent of wastewater, only 4 percent of it is reused. In Israel, their reuse of wastewater is about 80 percent, so we know that it can be done. We have to create an environment supporting innovation and cross-border, multi-sector collaboration so that critical solutions such as water reuse can be effectively addressed.

Globally, the private sector has a lot of industry experience and work in partnering with the public sector. It is this expertise in building long-term, strategic relationships that the private sector can bring alongside much-needed capital to outdated water systems across North America. To date, the private sector has worked alongside public stakeholders to provide solutions across all types of sectors, representing about \$92 billion of economic output. For the community, these public-private partnerships (P3s) have created efficiencies and developments saving Canadian taxpayers nearly \$10 billion in costs, and representing an attractive opportunity for addressing the water deficit.

Where do water sector P3s stand in the United States?

In the U.S., there are more than 2,000 community water or wastewater facilities that are actually designated as P3s, so there is already a high level of collaboration going on in North America around water and wastewater. What we need to do is embrace it further.

The Environmental Protection Agency estimates that more than \$600 billion will be needed for water infrastructure improvements in the United States over the next 20 years. With municipalities receiving less than 10 cents of every tax dollar, there is a huge amount to be invested that cannot be done by municipalities alone. In these instances, collaborating with the private sector can be about adopting new, innovative market mechanisms as much as it is about financing. How do we look at pricing? How do we look at life cycle? How do we look at some of these market mechanisms that start to work between water and wastewater, and recycling and reuse? With shared expertise, we can develop efficient technologies and operating practices.

A lot of our existing water systems are without basic technological integrations, meaning that they cannot tell you important details such as where a given leakage is. Just as you need smart grids in the electricity sector, you need a smart system for your water and wastewater systems to create efficient systems for both communities and increasing environmental imperatives. Once we have this foundation of efficiency and reliability, then we can work on updating regulatory frameworks to further enhance sector accountability.

In a public-private partnership, who owns the infrastructure? Who manages it? Who protects it?

There is no “one size fits all” for these projects. Public-private partnerships are designed to be flexible, changing based on the various stakeholders involved, including the needs of the local community impacted, and focusing predominantly on performance and reliability requirements.

Within these partnerships, the public sector can still retain the ownership of the infrastructure to a large degree, maintaining that public desire to own it for the long term while leaving the operating experience, life cycle, risk, technological upgrades, operating practices and regulatory frameworks to leading experts in the private sector.

Public-private partnerships create an opportunity to bridge a vast funding gap and deal with the current investment needs of municipalities and governments.

Government-led institutions such as the Canadian Infrastructure Bank can be a catalyst in opening the door to more of these partnerships. In 2018, the Infrastructure Bank put aside \$5 billion to invest in green infrastructure projects across Canada, with \$2 billion specifically allocated to improving the reliability of water infrastructure. That is an interesting proposal, decentralizing water systems and emphasizing neighborhood solutions for global concerns. One example we’re seeing a lot is water reclamation projects, or initiatives in real estate developments that collect storm water, which is then reused in irrigation, cooling, or toilet flushing. While decentralized systems can conjure images of rural areas, it is now being looked at more and more for integration in urban centers. They offer flexible solutions with added reliability, sustainability, lower cost, and improved water quality and security.

You mentioned reliability. What changes need to happen to prepare our water infrastructure for the 21st century?

Although we’ve mentioned that water service disruptions could put more than \$40 billion of daily economic activity at risk, the flip side of that is that, with resilient water infrastructure needs met, the U.S. Water Alliance estimates a potential \$220 billion in additional annual economic activity. As consumers of water, we think about it in terms of our quality of life — we turn on the tap, we expect the water to be there — but it has so much more to do with our economic activity, our productivity, and the ability of our cities to thrive and grow into the future.

We need innovation, including adoption of new technologies in how we address our water and wastewater; we need better forms of collaboration between the government and the private sector; and we need new techniques and frameworks, regulatory and non-regulatory, to incentivize efficiency around water and wastewater.

In addition, communication with the public will always be essential to facilitate greater private sector involvement in the infrastructure of water and wastewater, and we need to start tackling the social and psychological barriers that exist. For example, a study done by Stanford University noted that approximately 90 percent of respondents are in favor of using recycled water for nonpotable purposes, yet only 11 percent said that they would be willing to drink it. There are some great psychological barriers to reuse and recycle, but the opportunity is tremendous.

There are so many inefficiencies in the current systems: in some jurisdictions, 30 percent to 40 percent of water is being lost from source to destination. Smart meters and real-time identification of leaks could save up to 75 percent of water loss, just by real-time identification of what is happening within your system.

Also, current rate structures aren’t supporting the actual costs of water infrastructure. And we need to think more about how to encourage and incorporate innovation and technology in our systems, including things like building codes. In our experience, the difficulty with this is not so much in coming up with new ideas, but in escaping the old ones. We are so used to regulating what currently exists that we do not consider what should exist. We need to bring the whole conversation front and center, especially in places like North America where accessibility to clean water is taken for granted. This is a real issue as we look to futureproof our cities, because the truth is that our diminishing resources and the state of our water infrastructure is not publicly evident until disaster strikes. Securing our infrastructure for the 21st century will require investment, innovation and collaboration.

CORPORATE OVERVIEW

InstarAGF is building a North American investment platform focused on infrastructure, real assets and private equity investments in the middle market. Our team’s significant depth of sector and investment expertise, relationships, and global reach empower InstarAGF to help investors meet their investment goals.

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