

## InstarAGF Asset Management

# Local solutions for energy generation and distribution



**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. Gregory 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**, managing director of infrastructure at Institutional Real Estate, Inc., spoke with **Gregory Smith** of InstarAGF. The following is an excerpt of that conversation.

*I'm hearing the term "district energy" more often in the infrastructure space. What is district energy?*

In its simplest form, district energy is the interconnection of multiple facilities or buildings to provide heating and cooling for those facilities. I view it as including the heating, cooling and micro grid aspects involved in power generation and storage. While we tend to focus on energy needs when we talk about local generation, this micro grid structure can also include other local utilities, such as water and waste water activities.

*So, we are talking about generating power in the same location that it is used?*

In a broad sense, yes. Historically, energy systems have started with a large power plant — typically gas, coal or nuclear — situated well away from population centers with transmission lines that move the generated energy back into a city via a local distribution network and then last-mile lines to take it to the various buildings. Today, technology and innovation have made this lengthy and increasingly inefficient process much more scalable. We no longer need to generate all our power in one place and ship it to where it is needed. Power is now generated on a much more decentralized basis.

*How is the district energy being generated?*

Energy systems are local, so it is generated in a way that best suits a particular locality. District energy systems could have geothermal loops. They could include rooftop solar panels. They could have biomass heating and power production facilities. They could have chillers and various boilers. It is a combination of various forms of generation that draws on new technologies and enables innovation to create sustainability, resiliency and economic benefit to institutions and communities.

*Why is district energy growing in popularity now?*

District energy stands at the nexus of several demographic trends. The population is increasingly moving to urban

centers, and communities are demanding more sustainable buildings and services. As the population takes ownership of its neighborhoods, citizens are demanding more control of what types of infrastructure are developed in their backyards. Add in the advances in energy technology, and we have the perfect confluence of factors to support district energy systems.

*What are the benefits of this type of energy generation?*

One of the most important benefits is that district energy allows communities to become engaged and to control their own resources. People don't

a community in all stages of system development — planning, design, construction and operations — greatly increasing the likelihood that the project will be a success.

*Where are you seeing these district energy and micro grid systems being implemented?*

District energy is very adaptable, being suitable for everything from a connection of just two or three buildings to linking entire downtown neighborhoods within large metropolitan cities such as Chicago, Toronto or Vancouver. Because of this scalability, district energy systems and micro grids work



want large power plants in their backyard or someone else's transmission lines through their property. The success or failure of an infrastructure project is greatly influenced by the way the community views it. The more engaged it is in the planning and design of the project, with a greater understanding of the economic and social impacts, the more accepting it will be. This acceptance and communication translates into more successful infrastructure projects. District energy engages

just as well within small communities as they do for large urban centers. We see them becoming popular on large hospital or university campuses, while also being viewed as a solution to poor energy distribution in rural areas. Remote communities often face power fluctuations, outages and poor quality power because of the distance the energy needs to travel from a large power plant to the local community. In either large- or small-scale circumstances, moving to a district energy system provides



“ *The private sector can bring a holistic approach to looking at energy solutions ... allowing institutions to focus on core services.* ”

a better, more reliable source of power and energy, and is actually very economical.

*Where does the opportunity stand now, and where do you see it going?*

Municipalities — including universities, schools and hospitals — are responsible for most infrastructure spending. While the state, provincial or federal levels of government provide some assistance, these local stakeholders can be responsible for as much as 70 to 80 percent of total funding. These groups share the greatest burden for infrastructure investment, yet are the least able to use tax dollars to cover costs. Municipalities, universities, schools and hospitals often run utility plants that are connected to multiple buildings within a closed system. These older systems typically sap dollars from the institution's core services, have longstanding deferred maintenance issues and are very inefficient with heavy emissions of carbon dioxide. With investor partners, these systems can be modernized, expanded and even monetized. You can take a hospital or university central utility plant and connect it to other office and community buildings, bringing in additional revenue to offset costs. You can bring in outside investors that allow the insti-

tution to invest in and update that system, hit sustainability resiliency targets and create cost certainty into the future. This approach also allows the institution to free up funding for its core purpose — health-care, academics and research.

*What are the challenges to developing more district energy systems?*

Most of the projects in the district energy space are in the mid-market, which offers significant opportunity for partnerships and innovation with municipalities, universities, schools and hospitals. These opportunities, however, do not have the large-scale dynamic that many institutional investors are looking for. In addition, it tends to be an unstructured, unregulated environment. Developing partnerships with these entities takes time, and it involves working through the transactions methodically to offer a solution that can be beneficial to the universities, schools and hospitals, as well as profitable to the investors. Many investors simply do not have that type of skill, experience or time.

*What do private investors bring to the table?*

Right now, institutions typically have an energy system with a high-cost escalation

and longstanding deferred maintenance. The private sector can bring a holistic approach to looking at energy solutions, along with the innovation and technology required. It can provide price certainty to institutions and communities through a fixed-price contract or concession. Investors can guarantee performance and customer service levels. They can allow the institutions to focus on their core social or academic services, and get out of the energy generation business. That becomes the main value driver. Investors are not only looking at the upfront capital costs, but the lifecycle costs, maintenance costs and energy costs of running a central utility plant. They understand that making a higher investment today saves money over the long term. The private sector helps create and maintain a customized, long-term energy solution for those institutions and communities.

*How can we lower the risk on these projects?*

Derisking really rests on developing consistent government policies that encourage the creation of environmentally friendly and sustainable energy solutions for thermal energy. Supporting communities and institutions, such as hospitals and universities, with the right policy and regulatory framework to create sustainable, resilient development of district energy systems will lower the risk in the sector. By making it more structured and consistent, such policies would ultimately make district energy projects more accessible to a wider range of both investors and stakeholders. Policies that specifically encourage district or localized energy production, rather than the standard mega projects, would go a long way

in bringing the opportunity to the forefront.

*Do you see district energy as a viable option for the future, or will it remain an interesting but very minor component of energy generation?*

Urbanization is creating new infrastructure challenges and opportunities for cities that are trying to accommodate growth while managing their resources and dollars. Focusing on district energy helps solve both problems; this sector is cost efficient and requires community engagement. Beyond simply consulting with the community, engagement is about building local relationships throughout the process, getting buy-in and showing citizens and stakeholders that they will realize positive economic and social benefits from this energy system through jobs, through resiliency, through sustainability and through economic activity. Getting the community behind the project is key to lowering risk and creating value for investors. We see this movement from large-scale solutions to community-based or localized infrastructure as a continuing trend, and that trend is only going to escalate as we move forward.

#### 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.

#### CORPORATE CONTACT

**Sarah Borg-Olivier**  
Toronto Dominion Bank Tower  
66 Wellington Street West, 31st Floor  
Toronto, ON M5K 1E9  
+1 416-815-6260  
sarah.borg-olivier@instaragf.com  
www.instaragf.com