InstarAGF Asset Management

Sustaining reliable infrastructure in a changing energy sector

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.

Jonathan A. Schein, Institutional Real Estate, Inc.'s managing director of global business development, recently spoke with **Gregory Smith,** president and CEO of InstarAGF Asset Management, about trends in renewable energy infrastructure, with a focus on bioenergy developments. An excerpt of that conversation follows.

Greg, what impact is climate change having in infrastructure development and management?

It is a very hot topic — how we build resiliency and sustainability into our infrastructure is not only a question of safeguarding the environment today, but ensuring our developments will reduce carbon footprints in the years ahead. In terms of investment, interest in environmentally sustainable infrastructure is growing amongst institutional investors on a global scale, as well as within communities and governments on the local, provincial, state and federal level. Renewable energy will contribute around 30 percent of power generation globally by 2022, continuing to have a big impact over the next decade. If you think of it another way, by 2022 renewable energy alone will be equivalent to the power production in China, India and Germany combined. The opportunity is at that scale.

In what subsectors are you seeing opportunities, specifically?

We have had a lot of conversations in the past around hydro, wind and solar as it relates to renewable energy production, but another emerging trend is district energy and microgrids, which integrate and provide thermal energy, cooling and power production to neighborhoods and communities. Urbanization is supported by sustainability initiatives and technological improvements that are changing the way we look at and build our cities. District energy systems and microgrids combine these three elements to deliver innovative, community-scale energy solutions for urban resiliency.

Another major trend is bioenergy, which is a great environmental solution that sits within the broader renewable energy sector. Some of the difficulty with hydro, solar and wind is that they are intermittent sources of power. But bioenergy can provide that base load power as a non-intermittent source of power that is both renewable and a good, sustainable complement to grids. Countries around the world are looking for a more all-encompassing renewable energy solution — we believe bioenergy is an interesting area that will continue to develop over the next five to 10 years across the globe, particularly in the U.K. and North America.

What exactly is bioenergy?

Bioenergy is a process of power generation that makes productive use of organic waste. It can involve the byproducts of agriculture, including manure, and solid and liquid food-processing byproducts, fruit and vegetable spoils, processing waste, and post-consumer food waste. It can also make use of packaging and other food waste, cardboards, and wood waste. Bioenergy consists of organic material that can provide a whole new revenue stream or value-creation opportunity for agricultural industries and communities in North America and around the world. Within North America specifically, we see the potential for significant application of bioenergy solutions, and how it could be a powerful value driver for our agricultural communities.

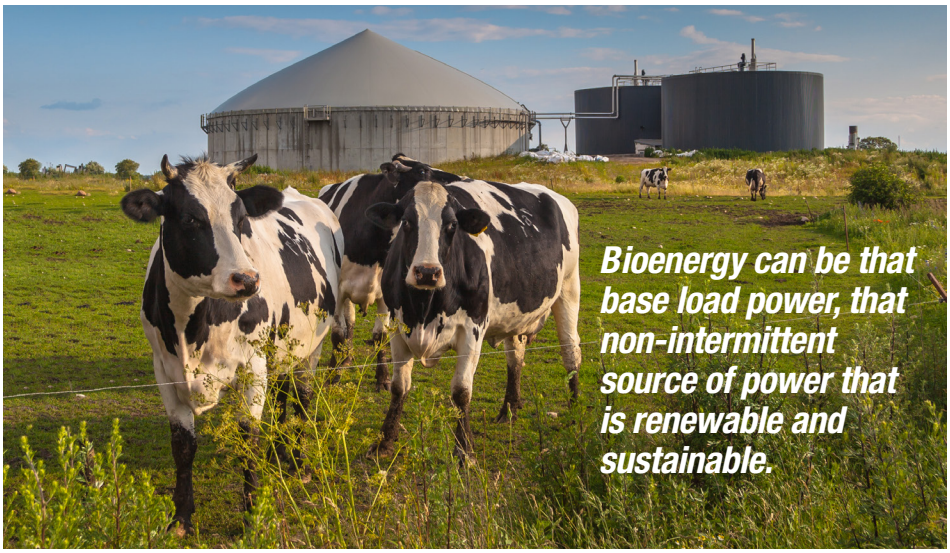
How do you see it fitting within the renewables marketplace?

There is a changing landscape in infrastructure, with an emphasis on environmentally friendly solutions that incorporate enhanced technology, community engagement and reliability. At the same time, we have current processes that create large landfills and other waste. What this leads to is an opportunity in converting organic waste into sources for fuel or energy.

In terms of the footprint from humans, cattle, hogs, chickens and livestock production, you can take a lot of that organic waste and turn it into something productive, creating a value change. In terms of the renewable power side or the actual production of it, what you are getting is a great combined heat and power alternative that simultaneously reduces GHG emissions. Bioenergy is an effective producer of heat that can be used in industrial or commercial complexes, with 90 percent of biomass globally going to derived or direct heating. It is also a great producer of energy, replacing the base level of coal and gas power production. It is a very strong renewable, non-intermittent source of power that supports a greener grid.

Where is bioenergy most effective and most commonly implemented at this time?

Europe has probably been at the forefront of using heat and power generation from biomass and bioenergy, generating around 66 percent of derived heat from biomass globally. In the Americas, biofuels have been more popular than bioenergy to date, presenting a sustainable option to replace dependency on oil as a fuel source. We see bioenergy and its power-production capabilities as a growing market. Similar to how North American public-private partnership models were initially based off of successful examples from the U.K., countries in Asia, Africa and the Americas have a growth opportunity to learn from how the U.K. and the EU are leading developments in bioenergy. Where bioenergy has traditionally been a rural energy source, emerging technology



and environmental imperatives are transforming it into a modern, community-scale option around the world.

In what ways has InstarAGF been involved in this marketplace?

At InstarAGF, we focus on North American value-added infrastructure investment opportunities in the mid-market. We like bringing the discipline of large-scale investors to benefit communities with projects at the local level, which is where much of the infrastructure investment need resides. As a team, we have done a lot of hydro, solar and wind projects in the past, following where new energy technology is headed. We see the next wave of power-generation opportunities emerging in bioenergy.

A key economic benefit of bioenergy compared with other forms of renewable energy is that it develops a deep partnership with communities. Compared with solar and wind, bioenergy creates significantly more job opportunities, employing around 2.8 million people globally. It is a more active type of power generation, creating a good employment opportunity for communities and cities while adding value to the agricultural industry, which is very important to Canada, the U.S. and many economies around the world.

What value are private investors able to provide to this process?

Private investors bring added expertise to manage complex bioenergy solutions, mitigating risk and ensuring the reliable supply of energy to the community while delivering a positive return to the environment. It is really about partnering with the community and local government to transfer risk to the private sector, while ensuring resiliency is built into your investment not only during the construction process, but also throughout the operation and maintenance of these facilities over the long term.

How do you get a local community to buy into these bioenergy investments?

By applying a very strong stakeholder- and community-engagement model around most of the investments that we make, we work to help assets further improve and manage their local relationships. Community consultation is important, but community engagement is crucial. This means proactively working with the various local stakeholders to define and deliver value to the community. You have to work hand in hand. It doesn't matter how technically or financially well an infrastructure project performs; it will not be successful unless it has the support of the community and stakeholders around you. Stakeholder engagement needs to occur through planning, design, construction and operation of the project. That is a core philosophy for us. Where we have seen barriers in bioenergy projects, it usually relates to developers or investors failing to properly engage the community. It is paramount that local community benefits be present for a project to be successful — it is a precondition.

Do you see any other challenges or barriers with this type of bioenergy investment?

It is important to have the right state, provincial and federal support for these types of initiatives. People need to take the time to understand the technology, potential solutions for heat and power generation, and how bioenergy can complement existing systems around the world. It is still a new type of energy, so there is a lot of work to do with elected officials and policy advisers to have them fully understand the significant strides made by such technologies in benefiting communities and the environment.

How do you see bioenergy infrastructure evolving as a subsector of infrastructure investment?

Our infrastructure needs to adapt to challenges surrounding climate change and a rapidly growing population. As a non-intermittent source of power, bioenergy has the ability to create more resiliency and efficiency in our energy systems. In Canada alone, energy use grew 28 percent between 1900 and 2013 — without energy efficiency improvements it would have increased by 51 percent. New technologies, partnerships and policies are resulting in a green electricity sector that has reduced emissions in Canada by almost 33 percent over the past decade. This outpaces all other industries in terms of our national emission reduction. Bioenergy represents an attractive pathway for countries to further enhance sustainability, leveraging current areas of waste to create a reliable energy solution.

Over the next 10 years, I think bioenergy has the ability to enable more wind, solar and hydro, providing the necessary renewable base-load generation for the electricity sector. We see the developments being made in bioenergy leading to a sustainable transition in environmentally friendly energy systems, and a great opportunity for investors.

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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