Cleantech Infrastructure: A New Investment Frontier?

- A conversation with Anadi Jauhari, CAIA

Anadi Jauhari is a Senior Managing Director at Emerging Energy and Environment LLC (EEE), a Connecticut-based alternative investment firm with current presence in Rio, Mexico City, and Panama. EEE specializes in renewable energy, cleantech, energy and emerging infrastructure. Prior to his current role, Anadi was the Head of Americas Project Finance Group in New York at Natixis, a French bank. He co-founded EEE in 2009 with John Paul Moscarella, a co-founder of the AIM-listed Latam-focused renewable energy and carbon developer, Econergy International plc, which was acquired by GdF Suez in 2008.

EEE's mandate is to invest institutional capital in emerging trends and the fast- growing markets globally through its dedicated investment funds. Over the next 10 to 15 years, EEE believes that technological innovations and climate change will create unparalleled investment opportunities for a range of investment strategies – venture, private equity, infrastructure and fixed income. As an alternative asset manager, EEE believes its strength lies in its industry and asset expertise, local presence in the target markets, and close relationships with local and overseas strategic and financial players. The firm currently manages an early stage cleantech venture equity fund in Latin America, which is fully committed. Its second Latam-focused private equity fund, backed by US- based, European and regional multilaterals, will focus on late stage renewable and cleantech infrastructure.

What is cleantech and why is it important for Latin America from macro and sector perspectives?

We define "cleantech" very broadly – to include companies with sustainable business models that produce goods and services, which increase energy efficiency, substitute or reduce fossil fuel consumption, and reduce or eliminate environmental waste in sustainable ways. These companies have varying risk profiles depending upon the business model and market positioning. On a risk-return continuum, on one end, within the broader cleantech universe, we have early stage investing in start-ups, with a high level of technology and commercialization risks, and infrastructure oriented companies, on the other end of the spectrum. Because of the diverse nature of risk-return profiles of investment opportunities, a wide range of investment strategies are feasible – venture, private equity, infrastructure and fixed income.

At a macro level, the region is in a very good economic shape today – major countries have good balance sheets in large part due to the structural and economic reforms. Over 80% of the region's \$5.3 tn GDP today, is accounted for by investment grade countries – Brazil, Chile, Colombia, Mexico and Peru as compared to mid- to late 1990's when the first wave of privatization and investments began,.

Although the region was not immune

from the financial crisis, it emerged quickly based on its exports and internal sources of demand with current expectation of future real GDP growth in the 4% to 5% range. With economic growth comes rising incomes and improved standards of living. This translates into more demand for energy. Per capita electricity consumption in the region is still low by developed country standards, which means that it will grow quickly. This creates a need to build new infrastructure that provides access to secure and cost-effective sources of energy to keep pace with growing demand. A reliable energy infrastructure is also fundamental to the region's energy security.

In our view, cleantech investments can help diversify energy sources and build new energy infrastructure that is both sustainable and cost-effective. The region is endowed with a vast, untapped renewable resource base which is more attractive (in terms of energy potential) than in the developed world. For example, small hydro (<30 mw), wind, solar, and biomass are in abundance in the region and only a very small fraction of the resource base has been utilized.

The region has the benefit of deploying the newest technologies developed elsewhere and hence, leapfrog other countries with more established energy infrastructure. As US, Canada, Europe, and Asia (especially China) begin to direct investment dollars in the development of clean technologies, which, once commercialized, can be transferred and deployed in the region.

As the cost of producing energy from renewable sources has come down quickly and if our long-term outlook is one of scarce natural resources (oil, gas etc), then cleantech, as an energy solution, becomes economically attractive. Also, as evident from recent renewable energy auctions in Peru, Brazil and Uruguay, renewables are competitive with traditional forms of energy without explicit subsidies, and in fact in the Brazil auction for wind energy, these bids were lower than natural gas combined cycle plants. Clean technology solutions – especially distributed generation – can be implemented quickly in smaller communities – as often there are no scale disadvantages with smaller renewable generation sources. Such projects can have direct economic benefits – through the localization of supply chains. Such green stimulus is an important contributor in creation of jobs which makes clean energy politically acceptable.

What we find interesting is that within the cleantech segment, especially on the technology end of the spectrum, as technologies mature, a company with the right combination of proven technology and business model, can take on "infrastructure" attributes – i.e., stable cash flow via contracts combined with strong market positioning.

What are the opportunities in cleantech infrastructure investing in Latin America?

We see tremendous opportunities in renewable energy generation (small hydro, wind, solar, biomass, geothermal), cogeneration, waste management, transport efficiency, energy storage, microgrid, efficient lighting systems, and biofuel/biogas infrastructure. We are focused on the infrastructure end of the cleantech – our definition of infrastructure includes assets stable cash flow, with low technical or operating risks. What we find interesting is that within the cleantech segment, especially on the technology end of the spectrum, as technologies mature, a company with the right combination of proven technology and business model, can take on "infrastructure" attributes – i.e., stable cash flow via contracts combined with strong market positioning. The traditional forms of clean energy infrastructure include contracted energy generation assets which have stable long-term cash flows and limited operating risk. Longer term, we see a regionally integrated market develop with transmission links that connect different renewable resource-rich markets.

What trends we are seeing in clean energy sector more broadly that the region could benefit from?

Declining all-in costs of renewable energy generation, in large part to technological improvements, greater diffusion of promising clean technologies from the developed markets, and a strong realization on part of the regulators to develop a regulatory and policy-framework are positive trends we see in the region which will continue to drive renewable and cleantech investments. Clean energy deployment can be done on a distributed generation basis, especially in solar, cogen, small hydro, which means smaller scale projects can be implemented quickly.

What are the challenges and risks in the implementation of cleantech investment solutions in Latam?

The development of clean infrastructure faces capital and execution or implementation related bottlenecks, as is the case in any market – developed or developing. From a capital perspective, access to early stage capital is still very challenging for project developers, and so is the availability of long-dated project finance capital - ideally to match the underlying contracts or the economic life of assets - on cost-effective terms. Local debt markets lack depth and unable to provide long-term asset funding that is often required for renewable and cleantech infra. This is an area multilaterals have provided innovative financing solutions in the past and they will continue to be important players in cleantech capital formation.

Foreign institutional investors interested in gaining equity exposure via unlisted fund structures are often concerned about currency risks in the region – not surprising given the region's history with high levels of inflation and currency crises. The macroeconomic situation is vastly improved now and going forward, our view is that the region will enjoy increased macroeconomic stability and regulatory certainty. We believe, depending upon the market, energy assets do provide some form of currency risk mitigation via contracted linkages with inflation (local, US) and or US$ tariffs. Long-term energy prices will still reflect fossil fuel prices which are global commodities – again depending upon the market in the region.

An important development is the emergence of local pension capital for private equity as an asset class. Pension reform in Brazil, Colombia, Peru, Mexico and Chile is likely to open up new sources of capital for private equity style investing as local pension funds diversify their investment options from their traditional reliance on government bonds. While it is unclear whether the new source of capital will find its way into renewable infrastructure, we believe the stable and essential nature of some of the clean infrastructure assets, in general, would be a good match for such capital.

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From an execution or implementation point of view, the development of local engineering, procurement and construction (EPC) base, as well as appropriate risk-transfer structures which mitigate counterparty risks (offtaker, EPC contractor, operator, etc.). The role of multilaterals and local government is critical in addressing some of these bottlenecks.

What opportunities will EEE's second fund invest in?

EEE's second fund will invest in renewables and cleantech infrastructure. The fund will take mitigated completion or greenfield risk, but generally no early stage development risks. Our infrastructure focus removes any technology or commercialization risks. The focus will also be on small- to -medium sized renewables and cleantech cos or projects (up to 50 MW to 100 MW individually) which at times can be aggregated into larger portfolios for improved portfolio efficiencies. A large part of economic activity in the region is still organized via small and medium enterprises (SME) in the region, which often lack access to capital and knowhow. The fund's likely target will be a subset of the broader SME universe, entrepreneurs with vision and experience to develop and implement the region's cleantech infrastructure in the region.

How does EEE create value in its portfolio companies?

EEE's senior professionals have extensive experience in the targeted sectors – we have a strong local presence in our key target markets. Our teams work closely with the portfolio companies and have a hands-on approach in managing the assets and in introducing best-practices in project execution, operation and financial controls.

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