

Monday, October 6th, 2014 Remarks by Nicholas Whitcombe, Managing Director, New York Green Bank Panel 1: Attracting and Maintaining Capital for Energy Transmission, Storage, and Distribution

Quadrennial Energy Review Public Meeting in New York, NY: Energy Infrastructure Finance

The conventional clean energy capital markets for large scale infrastructure are deep and robust. These markets enjoy economies of scale with low relative transaction costs and well-understood risk. These markets have scale, an abundance of data, and are readily traded. Developers, equity, and debt providers actively compete in these markets- using customized financings with customized contracts for large scale energy projects - particularly where the risks are well understood.

In less developed markets where risks are not understood, government policy and programs can work to provide comfort to investors and attract greater amounts of private capital. For example, the DOE Loan Program Office, in its support of utility scale solar generation, required the use of agency ratings to support loan guarantees, forcing these agencies to ride a learning curve to develop ratings criteria, necessary for the development of long term debt capital markets in the solar industry. This subsequently led to private sector banks lending to other projects without government involvement - as they now understood and were able to account for the inherent project risks.

Looking forward to 2030, we should consider how much energy supply needs will be addressed through the construction of more TS&D infrastructure. Or will smaller, local, more distributed, load reducing projects meet our energy needs displacing the need for more large-scale infrastructure.

Today, there are market gaps preventing clean energy projects from being financed to the full extent that is needed in order to reach meaningful scale. For example, private banks have little interest in financing individual small solar generation or single energy efficiency projects - but they have a strong interest in financing a large pool of standardized projects that have operating history.

In New York, NY Green Bank is implementing market-based policy along with complementary financial solutions - moving clean energy projects away from the traditional reliance on subsidies and incentives. NY Green Bank is actively engaging market participants (lenders, equity, developers) to address existing market gaps. We have issued an open solicitation, which encourages financing institutions and project developers to come to us with credit-worthy projects and transactions they want to close, but are unable to do so because of specific market barriers.



We only invest in proven technologies, so the developers and financiers coming to us do not suffer from technology risk. The technologies are broad in scope, and include a variety of renewable resources such as solar, wind, and biomass, and fuel cells, as well as energy efficiency resources such as thermal and electric storage. While the list is broad, the issue is, in many cases, capital availability.

Here are a few examples of transactions we are working on in an effort to advance these capital markets and expand clean energy financing opportunities. To facilitate bond markets in clean energy, for example, a warehouse line of credit of smaller sized financings based on standardized contracts will act as an aggregator. This creates plentiful data, a necessary element for investor and rating agency analysis. These are loans to smaller clean energy projects such as commercial and industrial solar projects which could ultimately be standardized, aggregated and sold to the capital markets. They are also loans to energy efficiency projects where an energy savings agreement provides a long term benefit to a public or commercial building - which also could be standardized, aggregated and sold to the capital markets. We can also provide guarantees for larger solar, wind or biomass projects that are under the radar screen of traditional project finance institutions, yet of ideal size for regional banks that are unfamiliar with the asset class and perceive them as risky. NY Green Bank provides the necessary financing tools that these banks can utilize efficiently for other projects - and gain a strong understanding of the methods to mitigate risk. Whatever the financing arrangement may be, a partnership with the private sector will earn a return for both New York Green Bank and its private sector clients.

NY Green Bank is working with private sector finance institutions to leverage both their capital as well as their origination capabilities. In New York there are a large number of attractive, economically viable projects - and a significant level of investor interest - and NY Green Bank is seeing a very robust market reception to our solicitation for clean energy financing transactions.

A virtuous cycle has been at work in solar energy, where more investment leads to lower costs, which leads to energy parity, which leads to more infrastructure investment. There can be a similar virtuous cycle in clean energy finance. Projects are financed, scale is created, data is gathered, risks become understood, capital is attracted, creating robust self-sustaining capital markets.