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Securitisation as a means to finance distributed solar projects

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The future of solar energy in the US appears uncertain. With investment tax credits set to expire in 2016 the solar industry may lose the tax subsidies that have been one of its main engines of growth. The tax equity investor base for solar energy projects may disappear if Congress broadly closes tax deductions in order to raise revenue. The barren prospect for the future of the solar energy industry reflects a bleak past. Efforts to create utility scale projects using parabolic trough technology failed owing to difficulties posed by the technology. Photovoltaic panel technology may be more practical, particularly in opening the way for distributed solar projects, but its image has been marred by the well-publicised travails of the solar panel manufacturing industry in the US and other countries. A trail of bankruptcies over the past two years has left the solar industry with a flighty reputation. The solar winds appear to be blowing in the wrong direction, particularly when one considers the historically low cost of natural gas.

And yet solar energy remains compelling, particularly as uncertainties about the long-term environmental impact of fracking technology foment a steady drumbeat of opposition to cheap natural gas. Demand for distributed solar technology, already strong, will continue to grow with the aid of renewable energy mandates at the state level. Those renewable portfolio standards require a certain percentage of renewable energy in a state's overall energy supply. As an example, California enacted in 2011 a law requiring the use of 33 percent of all electricity consumed in the state by the year 2020 to be generated from renewable energy sources. Despite the challenges in the solar panel manufacturing sector, the silicon-based technology of solar panels has proven to be reliable and scalable. Solar energy indubitably helps advance the public policy goals of environmental sustainability and energy independence. It appears aligned with the policies of the second Obama administration.

The promise of securitisation

For solar energy to meet its potential in the face of the economic and fiscal headwinds described above, it will be necessary to develop widely distributed forms of low-cost capital to finance distributed projects. Securitisation techniques provide an especially powerful tool to help meet this objective. Indeed, asset-based securitisation could play a role in the solar energy market that is fully as transformative as the role that securitisation played some 30 years ago in revolutionising mortgage finance and in the process accelerating home ownership and helping drive economic growth for many years.

Securitisation is a disintermediated financing technique for distributing risk to capital markets investors by selling pools of assets to bankruptcy-remote vehicles that issue asset-backed securities to capital markets investors. Tranches of the asset-backed securities are rated investment-grade by one or more rat- ▸▸

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ing agencies, based on the credit quality of the assets, the viability of the structure, and credit enhancements that permit senior classes of asset-backed securities to be rated more highly than the securitised assets themselves. Securitisation permits originators of financial assets to obtain liquidity and relatively cheap finance, diversify their investor base, secure off-balance sheet financing and replace the risks associated with the ownership of financial assets with income from servicing arrangements and residual interests.

Securitisation could play a similar transformative role in furthering the financing of solar power and accelerating the widespread implementation of distributed solar projects. The creation of rated structures fundamentally isolated from the credit risk of the solar project sponsor could permit the solar power industry to evolve from a bilateral financing model that depends heavily on tax equity, to a capital markets model that is funded from the deep well of a liquid secondary market in solar-backed securities.

The ultimate development of a liquid secondary market for solar backed securities will provide liquidity to allow the solar energy market to grow in a manner analogous to that in which securitisation was an engine of growth for housing markets. As happens with securitisation more generally, local and regional banks and other originators of solar loans or leases would be able to provide finance without being constrained by their balance sheets. This, in turn, will allow banks to grant to their customers installing distributed solar facilities solar credit lines, which will enable installers to offer to the residential, commercial or industrial solar power user a viable financing option for otherwise capital intensive financing.

Challenges in securitising solar energy

The magmatic, inchoate state of solar capital markets is reminiscent of the United States mortgage market at the dawn of the golden age of securitisation. At this formative stage the strategic imperative will be to create the infrastructure to structure, package and sell solar-backed securities to capital markets investors in the same manner as mortgage-backed securities. In order to create this infrastructure we shall have to overcome the challenges of data, standardisation and regulatory reform.

Solar power as an asset class is fundamentally different from mortgages because securitised cash flows depend more on matters beyond the obligor's control, such as the technology of solar equipment, and expected quantities and intensity of sunlight. In addition, the credit underwriting process for solar power offtakers depends on variables that differ from those that affect the performance of mortgagors. Models of creditworthiness, technological performance, risks to cash flows and recoveries following default must be robust enough to provide a reliable baseline case to facilitate the proper sizing and pricing of credit enhancements for solar-backed bonds.

An important element of the infrastructure of solar securitisation will be the development of standardised approaches that are informed by the experience of securitising other types of assets but that respond to the peculiar and complex characteristics of solar energy and its complex regulatory overlay. Standardisation of documents and reporting conventions will be as necessary as they are in on-the-run asset classes but must be carefully tailored. Servicing and special servicing are as important to solar power securitisation as they are to mortgages and other asset classes, but with important modifications to reflect the importance of operations and maintenance. An important question may be how to harness the servicing expertise of utilities to help administer solar energy and manage obligor default risk. The challenge of solar securitisation will be to recast old concepts to address the unique needs of this asset class and reflect those needs through the prism of the regulatory state.

The complex and evolving regulatory regimes for solar power and securitisation present another challenge. Neither contemplates securitisation of solar power receivables, so their evolution and adaptation to the needs of the new market will be vitally important. Disclosure and liability rules (including concepts of materiality) must be rethought for solar securitisation, as must the emerging regulatory framework for securitisation under both ▸▸

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the securities laws and the commodity laws. Assignee rights under energy regulation such as net metering rules must be considered to ensure that securitisation investors will be protected against risk of obligor default. Difficult intercreditor issues will arise between the interests of solar securitisation investors and those of mortgage lenders, including other securitisations. Securitising distributed residential and commercial solar projects will raise different types of regulatory concerns.

Fitting securitisation into the regulatory and tax constructs for equity vehicles will also be an important issue. Developments in the law of master limited partnerships, business development companies and REITs, as related to solar energy, have important implications for the structure of solar securitisations. Some of those developments may impact the tax treatment of a securitisation materially by throwing into question whether a solar securitisation could be considered to be a 'taxable mortgage pool'. The coexistence of securitisation and tax equity structures will also raise complex tax issues as economic attributes of solar projects may be allocated between tax equity and traditional fixed income investors.

Emerging in sunlight

For all its challenges, securitisation of solar power receivables represents a powerful tool to permit capital markets to provide the motive force for a revolution in energy consumption. Converting solar energy into a securitisable asset class will require a broad-based consensus-driven process focused on public policy imperatives, regulatory adaptation and the legal implications of bringing sunlight into 21st century energy policy. ■

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