Financing trends in the solar industry

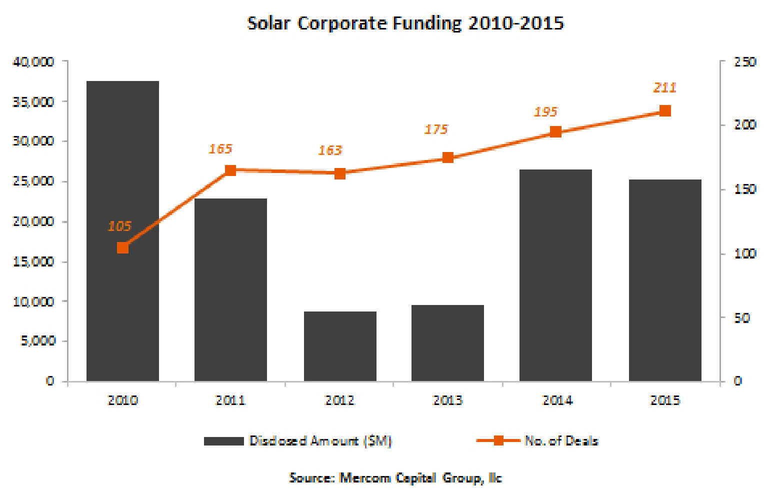
Finance in 2016 | It was a turbulent year for solar finance in 2015 with big successes, more innovation and a few nasty surprises too. Mercom Capital's Raj Prabhu takes a forensic look at solar finance in the last 12 months and the clues offered for the year ahead

Corporate finance in solar has evolved quite a bit over the last seven to eight years since the great recession. The first wave of funding into solar was mostly venture capital (VC) and private equity going into promising technologies, such as thin-film, CSP and CPV, and especially crystalline silicon. It's hard to believe, but this was a time when polysilicon costs were about US$300-400/tonne and crystalline silicon module costs were about US$4/W. Venture capitalists poured a lot of money into developing a replacement for the 'expensive' crystalline silicon technology based modules. Chinese companies, armed with strong support from the government, flooded the market with cheap crystalline modules which killed off most of the VC-funded technology companies. Chinese government-owned banks provided credit of more than US$30 billion to Chinese manufacturers in 2010 alone. With the capital markets affected by the recession, public market financing was scarce and debt was expensive and hard to obtain, not to mention the financial markets were new to solar and not yet comfortable with investing.

Post recession, as venture capital funding dried up, the capital markets began to thaw and we started seeing solar companies beginning to access public and debt markets for financing through initial public offerings.

Total corporate funding, including venture capital, public market financing and debt, amounted to US$25 billion in 2015 compared to US$26 billion in 2014, though the number of transactions went up from 195 to 211.

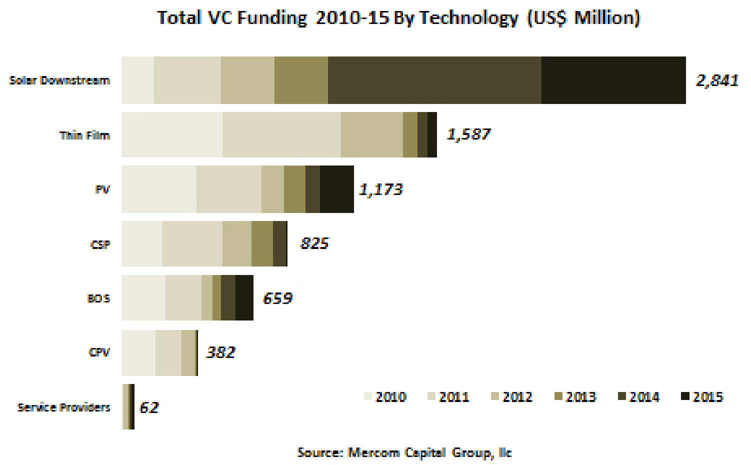
Venture capital funding into solar crossed US$1 billion in 2015 compared to US$1.3 billion in 2014. Solar downstream companies, especially third-party finance firms focused on residential and commercial lease, loan and PPAs, received most of the VC funding. Some of the important deals in this space were the US$300 million raised by Sunnova Energy, followed by the US$80 million raised by Sunlight Financial and the US$50 million raised by Sungevity. We expect this trend to continue and possibly accelerate as the Investment Tax Credit (ITC) extension in the US has cleared the way for these firms to grow exponentially over the next five years. Innovative solar technology companies meanwhile continue to receive smaller rounds of funding. Funding for manufacturing-focused companies has become rare with a few exceptions, like Solexel and Oxford Photovoltaics.



We are also seeing more money going towards off-grid markets in Africa, India and South Asia. Some notable deals included Off-Grid Electric, a Tanzania-based company providing solar energy in Africa using a prepaid model, with US$25 million raised, M-KOPA Solar, an asset financing company that sells solar home systems to off-grid households on a mobile money payment plan in Kenya, Tanzania and Uganda, with US$19 million, and BBOXX, a company that designs, manufactures, distributes and finances plug & play solar systems, raised close to US$10 million among others. Mercom's Q4 and Annual 2015 Solar Funding and M&A Report tracked more than US$100 million in VC funding going towards rooftop, distributed, financing and product companies in these markets.

Financial innovation in the solar industry

There have been several innovations on the financial side to bring the cost of capital down including no-money-down lease, loan, securitisation and yieldco structures. Yieldcos tend to lower the cost of capital and help recycle capital by separating long-term cashflow from riskier assets in the project pipeline. As a result, the market had been willing to assign higher multiples of earnings for distributed cashflow. This enabled companies to access the low cost capital required to fund rapid growth. Yieldcos can usually generate an annual dividend yield of 4-10% or more, with attractive dividend growth potential over the long-term. Typically, the same projects in a yieldco tend to be valued more than if they remained with the parent project

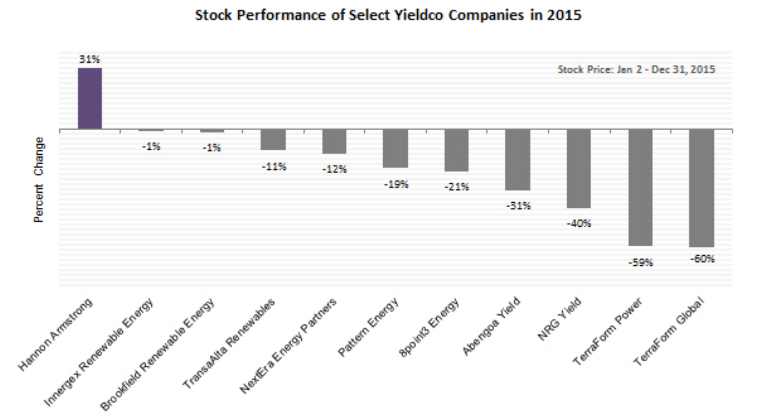


development company.

Publicly-traded solar companies, especially yieldcos experienced a lot of turbulence in 2015. The year began with yieldcos taking off and they were extremely popular with investors in the first half of the year, but were hit hard in the third and fourth quarter with most stocks declining significantly. Yieldcos were supposed to be relatively safe bets with a predictable growing dividend yield. Newly minted yieldco stocks jumped in the first half of the year and companies that were expected to behave and operate like traditional, dull utilities suddenly began to operate like high-growth tech companies. SunEdison's acquisition of Vivint Solar, a rooftop solar company, went a step too far for the markets, which began to question its pace of acquisitions, the strategic fit of the Vivint acquisition and the company's over-leveraged situation. Rather than operating like a traditional yieldco, which is supposed to have a low-risk profile with predictable and growing cash flows (most of which is distributed to investors as dividends), Terraform, SunEdison's yieldco and the poster child for solar yieldcos, began operating like a high-growth company in the eyes of the market which in turn has made investors skeptical of all solar yieldcos. While a course correction could happen quickly, this has been the major story playing out over the last six months. In the short-term, we may see slower fundraising and project acquisition activity from yieldcos.

The overall stock market decline further slowed public market financing activity in Q4, but 2015 was still the best year we have seen with almost US$6 billion raised in 2015 compared to the US$5.2 billion in 2014. This included seven initial public offerings (IPOs) bringing in US$1.8 billion in 2015. The largest IPOs were the US$675 million raised by TerraForm Global Yieldco (SunEdison's global yieldco) and the US$420 million raised by 8point3 Energy Partners, a yieldco formed by First Solar and SunPower. Other IPOs included Sunrun's raise of US$250 million, Xinte Energy's raise of US$166 million and CHORUS Clean Energy's raise of US$133.5 million. The remaining two IPOs were the US$126 million raised by SolarEdge Technologies and the US$4.2 million raised by Grenergy Renovables.

Securitisation deals are another growing trend that can help lower financing costs. Solar lease companies like SolarCity are using securitisation deals to aggregate rooftop asset pools and transform future



Note: For 8Point3 Energy, NRG Yield and TerraForm Global data available for less than 1 year

Source: Mercom Capital Group, llc

cashflows into securities. Interest rates paid to investors typically tend to be lower than tax equity financing, which is in the 8-10% range.

Securitisation deals are slowly making inroads into the solar sector. SolarCity executed the first securitisation deal two years ago. The industry has so far seen only eight of these deals totaling US$849 million, including five deals from SolarCity. In 2015, there was one deal each from Sunrun, AES and BBOXX. BBOXX was the first to execute a Distributed Energy Asset Renewables (DEAR) securitisation deal for distributed solar projects.

We also continue to see money going into solar funds and it was a record year for dollars raised in residential and commercial solar project funds by solar lease companies. There were 23 funds announced for a combined total of US$5.5 billion in 2015, a 36% increase over the previous year. Of the US$5.5 billion, US$4.3 billion went towards the lease/PPA model and US$1.2 billion went to loan products. Since 2009, US$17 billion has gone into residential/commercial solar funds to support lease/PPA/loan financing for residential and commercial installations led by SolarCity, Sunrun, Sunpower, Vivint Solar, Sungevity, Clean Power Finance and SunEdison.

With the ITC extension, we expect third-party financing companies to continue to raise residential and commercial lease/loan funds in record numbers.

Solar mergers and acquisitions

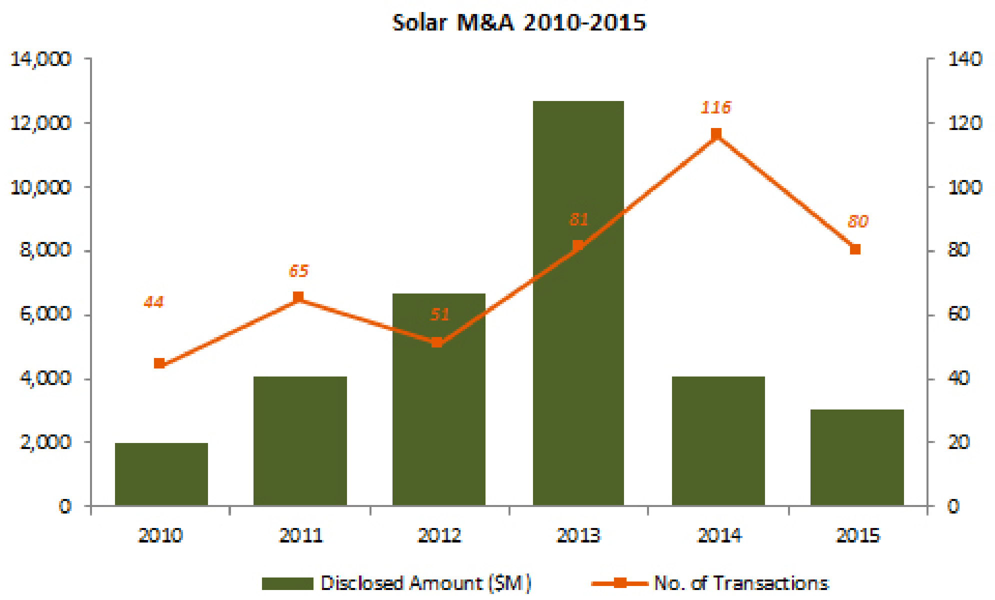
While there were fewer solar corporate M&A transactions in 2015, with 80 compared to the 116 in 2014, solar project M&A activity, on the other hand, soared to a record 204 transactions in 2015 compared to 163 in 2014.

Most of the corporate M&A activity was in the solar downstream space with companies purchasing solar developers for their pipelines. Solar downstream companies logged the greatest number of acquisitions with 49, followed by solar manufacturers with 13, and BoS companies with nine transactions. Of the 80 corporate M&A transactions in 2015, 21 were in the United States and 15 were in China. Companies that made mulitiple acquisitions in 2015 included SPI Solar, which acquired four companies, Global EcoPower which acquired three companies and SunEdison which acquired two.

The largest project M&A transaction was the US$1 billion acquisition of an 80% stake in Gestamp Asetym Solar from Gestamp Renewables by KKR, an investment firm.

Solar project acquisition activity surged in 2015 with a record 204 transactions (82 disclosed) compared to 163 transactions (61 disclosed) in 2014. Spurred by yieldcos, 2015 has been by far the best year for solar project acquisitions. More than 12.7GW of solar projects were acquired in 2015, a record for the sector. Project developers were the most active acquirers with 74 transactions, acquiring close to 3.9GW, followed by investment firms with 42 transactions for 2GW of solar projects. Yieldcos acquired 41 projects for 2.3GW.

As we look beyond 2015, we expect VC funding to continue to go towards downstream companies. We expect to see more securitisation deals and strong tax equity fundraising by residential and commercial solar funds with the extension of the ITC. We also anticipate the next three to five years to be strong for project acquisition activity especially if yieldcos recover. ■



Source: Mercom Capital Group, llc

Active Project Acquirers in 2015

Project Developers	Yieldcos	Investment Funds	Utility/IPP	Manufacturers	Others
3,866.8 MW	2,271.6 MW	1,956.8 MW	1,902.4 MW	1,892.3 MW	843.4 MW

Source: Mercom Capital Group, llc

Author

Raj Prabhu is CEO and Co-Founder of Mercom Capital Group, llc, a clean energy communications and consulting firm with offices in the United States and India.