Looking beyond 2016 – the future for renewables

Over the past decade, federal tax credits have been vital in stimulating investment in onshore wind and solar PV. Installations of solar PV projects have grown at an annual compound rate of 76% since the solar investment tax credit (ITC), which provides a 30% tax credit for residential, commercial and utility-scale solar projects, was implemented in 2006 (source: Solar Energy Industries Association). The sizeable 75%+ annual decreases in wind installation in the years following the expiration of the wind energy PTC also highlights the reliance of the wind industry on this subsidy.

Despite efforts by senators on both sides of the aisle to extend these tax credits, not to mention President Obama’s resolve to extend them on a permanent basis as part of a $11.9 billion 2016 budget package for clean energy and emissions reductions, there remains a substantial risk that the PTC will expire and the ITC will be reduced from 30% to 10% at the end of 2016.

So what are the prospects for renewable energy post-2016? Although the answer depends on a variety of factors, one cause for optimism is the enormous demand for new electricity generation capacity that is projected over the next decade. The Energy Information Administration (EIA) predicts some 13 GW of coal-fired electricity generation capacity will be retired in 2015 alone as a direct result of the implementation of the Environmental Protection Agency's new air emission regulations and mercury and air toxic standards (MATS).

This is not a short-term issue. A report by the Government Accountability Office released in September 2014 predicts a staggering 42 GW of coal plants will be taken offline between 2012 and 2025, representing 13% of the country’s total coal capacity.

Renewables will certainly play an important role in plugging this energy gap in the short-term. The EIA estimates that 20 GW of utility-scale electricity generating capacity will come online in 2015, of
which 9.8 GW will be wind, 6.3 GW natural gas, and 2.2 GW solar. But this is in a year when wind and solar PV can still qualify for tax credits. The more important question is the role renewables will play in plugging this gap vis-à-vis natural gas once subsidies expire at the end of 2016.

Many states have renewables portfolio standards (RPS) in place that mandate power producers to generate a certain percentage of their electricity from renewable sources by specific dates. Some 29 states currently have RPS in place, some with specific targets for solar generation. Announcements in early 2015 indicate RPS may continue to be a strong driver of renewable energy in years to come. In January 2015, California Governor Jerry Brown announced plans to raise the state’s RPS to 50% by 2030. The state’s current RPS mandates utilities to source 33% of electricity from renewables by 2020.

Also favorable to renewables are the impressive cost reductions achieved in the past five years. Analysis by Lazard indicates the wind levelized cost of energy (LCOE) fell 58% during this time. Solar PV LCOE declined by 78% during the same period. These cost reductions suggest that renewables are close to being able to compete toe-to-toe with new combined cycle natural gas projects. This is particularly impressive given the currently low natural gas prices.

Not all renewable energy projects utilize tax credits. In fact, the owners of many residential and smaller scale commercial renewables projects do not have sufficient tax liabilities to leverage the credits, although some can sell Renewable Energy Certificates (RECs) or use the tax depreciation. These projects are often too small to monetize their tax credits through tax equity investors, rendering tax equity finance unfeasible. These types of projects will not suffer as much from the PTC expiration or reduced non-residential ITC because they never utilized them in the first place.

“The expiration and reduction of either the utility-scale PTC or Section 48 commercial ITC tax credits will certainly change the returns and the dynamics of the industry, impacting some more than others,” explains Lee Peterson, Senior Tax...
Manager for CohnReznick’s National Renewable Energy Practice. “For a start, these non-residential tax policies are primarily only useable by the larger players. Tax equity financing is inherently large-scale financing. In general, there are 26 institutional tax equity investors who are investing based on the tax incentives. This means that if you are not one of the companies securing investment from these investors, you would see a lessened impact. Companies who do rely on tax equity, particularly in the wind sector, may experience the most pronounced disruption in the earlier stages of tax policy changes.”

In short, the marketplace post-2016 may seem to be a daunting prospect for the renewable energy industry at present. But the long-term prospects look bright. Projections by the EIA say it all. They predict the share of US electricity generation coming from renewable sources (including conventional hydro) will grow from 12% in 2012 to 16% in 2040. Significantly, this outlook assumes that federal tax credits will expire as currently anticipated.

But the renewable energy industry still has much work to do in order to achieve a greater share of the electricity mix. The supply chain, developers, government agencies, and the advisory community must collaborate to achieve further cost reductions. Efficiencies in the supply chain are vital. However, innovation in business models and financing structures will also play a critical role in reducing overall production costs.

ENERGY STORAGE – GOING MAINSTREAM

The potential for energy storage is huge. If implemented at scale, it would unlock the value of renewables by enabling energy generated during times of limited demand to be stored and released when needed. Storage also makes electricity grids more efficient and resilient by better balancing supply and demand. While energy storage technology has been around for some time, projects have thus far been built on a piecemeal basis and not as part of a long-term coherent strategy to increase storage capacity on the grid.

But this is now changing. California undoubtedly has the most ambitious plans. The state’s three investor owned utilities – Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric - recently issued solicitations for 119 MW of storage capacity as part of a long-term mandate to collectively procure 1,325 MW of storage capability by 2020. The three utilities will purchase storage capacity through four requests for proposals in 2014, 2016, 2018 and 2020, each increasing in size. Storage has become a priority for California due to the growing volume of renewable energy capacity on the grid. In fact, the California Independent System Operator expects curtailment of wind and solar projects to increase in the coming years as more intermittent capacity comes online. The opportunity for...
storage is not limited to California. In early 2014, Hawaiian Electric Co, the state’s largest utility serving 95% of the island’s residents, launched a request for proposals for 60-200 MW of storage capacity to help manage the island’s electricity grid. The grid has become increasingly stressed due to the rapid increase of solar and wind capacity. The projects must be able to provide 30 minutes of storage capacity. The utility hopes they will be online by 2017.

New York also has ambitious energy storage plans. New York City utility Con Edison’s Demand Management Program aims to install 125 MW of load reduction capacity through energy storage, demand response, and energy efficiency by June 2016. To stimulate investment in energy storage, an incentive of $2,600 per KW and $2,100 per KW will be provided to thermal and battery storage respectively. The measures are partly in response to the impending closure of the 2 GW Indian Point nuclear power plant that supplies about one-fifth of New York City's base load.

The promotion of energy storage in multiple states means the market is set for tremendous growth. A report by GTM Research and the Energy Storage Association released in March 2015 predicts that 220 MW of storage capacity will be installed in 2015, up from 62 MW last year. The report predicts that 861 MW will be installed in 2019 when the market will be worth around $1.5 billion.

The growing energy storage market will not only create tremendous opportunities for manufacturers of technology and equipment deployed in projects, but also for the investor community. Given the small balance sheets of some of the companies vying to build storage projects, many will try to fund construction through project finance structures. The similarity of storage contracts to traditional gas tolling contracts in, for example, California’s program, means project finance structures are feasible.

But given the limited track record of energy storage technology, equipment providers will need to provide robust long-term warranties in order to attract debt and equity investors. These warranties must be backed up with large balance sheets following the bankruptcy of some major battery manufacturers in recent years.

The emerging nature of this market also means there will be opportunities for venture capital funds seeking to identify disruptive storage technology. Investment statistics indicate that venture capital and private equity funds are already taking note – pouring $319 million into North American storage companies in 2014 and an even greater amount ($398 million) the previous year, according to Clean Energy Pipeline. The decrease was due to a small number of abnormally large investments in 2013.

There will also be opportunities for developers of renewable energy projects to incorporate storage into their projects. In March 2015, SunEdison announced it will acquire storage start-up Solar Grid Storage. The company combines lithium ion batteries and inverters with solar PV projects. This is the first example of a dedicated solar project developer acquiring a storage business. It certainly won’t be the last.
COMMUNITY SOLAR – PRIMED FOR SIGNIFICANT GROWTH

Another area of renewables poised for tremendous growth in the next five years is community solar. Put simply, community solar projects are those financed by pooling investments from multiple members of the local community. Investors benefit from either financial returns or from the produced power. This type of arrangement is an attractive way for homeowners or businesses that cannot install solar panels, either because their property is rented or is in shade, to enjoy the benefits of solar energy.

Community solar projects can take a variety of forms. The most common are:

1. Utility sponsoring: Some utilities give their customers an option to purchase solar energy from a project for a fixed rate for the long-term. The rate paid is normally higher than commercial rates, but can offer long-term protection against future rate increases.

2. On-bill crediting: This allows residents or businesses to finance a share of a solar project and then receive a credit for this on their utility bill.

3. Special purpose entity model: This enables homeowners or businesses to join a special purpose business enterprise that develops, and then owns, a shared solar project.

4. Non-profit model: This enables donors to invest in a solar project owned by a not-for-profit organization.

CASE STUDY: The Bright Tucson Community Solar Program

“Given this vast addressable market, it is no surprise that a number of companies from small developers to large utilities and panel manufacturers are piling into community solar.”

According to data compiled by SharedRenewables.org, there are currently 55 community solar projects in the US spread throughout 18 states. The long-term market for community solar is huge. The National Renewable Energy Laboratory estimates that between half and three quarters of US households and half of all businesses cannot host an on-site solar PV system. Predicting the rate of growth of community solar projects is hard since the market is just getting started. However, the Solar Energy Industries Association predicts between $6 billion and $12 billion will be invested in US community solar projects between 2015 and 2020.

Given this vast addressable market, it is no surprise that a number of companies from small developers to large utilities and panel manufacturers are piling into community solar. Notably, First Solar, one of the country’s largest manufacturers of solar panels, joined forces with Clean Energy Collective, the country’s leading developer of community solar projects, in December 2014 to develop community solar projects on behalf of utilities.

Launched in February 2011, the program offers Tucson Electric Power customers the opportunity to purchase blocks of 150 KWh of solar per month. Each block purchased replaces the charges for an equivalent amount of traditional power at a cost of $3.00 per block fixed for 20 years. The purchase also exempts users from the Renewable Energy Standard Tariff and the Purchased Power and Fuel Adjustment Clause, meaning the actual cost is lower. As of May 2014, more than one thousand residential and business customers had signed up for the program, totalling almost 5 MW of capacity.
EXIT STRATEGIES – ARE YIELDCOS ALWAYS THE ANSWER?

With YieldCos’ insatiable appetite for renewables assets, long-term institutional investors still hungry for yield, utilities needing to meet RPS targets, and large corporations desperate to boost their green credentials, the range of acquirers of renewable energy assets is deeper and more diverse than ever before.

“The six existing North American YieldCos, which have a combined market capitalization of just under $20 billion, acquired 3.8 GW of effective renewables capacity in 2014.”

This has resulted in a surge in M&A activity. According to data compiled by Clean Energy Pipeline, some 169 acquisitions of renewable energy projects or project portfolios in the US and Canada valued at $15 billion were announced in 2014. This represents a 14% increase over 2013, when there were 148 deals totalling $8.9 billion.

YieldCos were particularly active on the acquisition front. The six existing North American YieldCos, which have a combined market capitalization of just under $20 billion, acquired 3.8 GW of effective renewables capacity (defined as the capacity of the project multiplied by the stake acquired) in 2014, according to Clean Energy Pipeline. This is a significant increase when compared to the 2.6 GW (effective capacity) transacted in 2013.

Although it is a great time to be a seller, sponsors still need to give careful consideration to their exit strategies as different classes of acquirers have different requirements. Despite all of the noise surrounding YieldCos, there is still a relatively small number in the US. An even smaller number of these are seeking assets not developed by their affiliated companies. Even those interested in acquiring assets owned by non-affiliated companies have strict requirements for project size, leverage, and the credit rating of the offtaker among other requirements. This means that many projects will not be saleable to YieldCos.

“YieldCos are often the best buyer, but because they need tax equity, it puts some constraints around what you can sell to them,” says Robert Sternthal, President of CohnReznick Capital Markets Securities. “Specifically, you need an investment grade offtaker. The size and quality of the asset is also very important. Putting leverage on projects also makes it more difficult to sell because, even though you might have higher cash on cash, the amount of equity they will have to put in will be too small to be attractive. In addition, several YieldCos aren’t interested in acquiring anything— they have their own pipeline, so would not be buying non-utility-scale assets.”

Given the success of YieldCos currently listed in North America, it is unsurprising that some developers are evaluating whether this structure might represent an attractive exit option. However, as Alejandro Burgaleta, CFO, Gestamp Renewable Energy, explains, project developers need to give careful consideration as to whether YieldCos are their best option.

“We are evaluating a number of opportunities, including forming our own YieldCo,” he said. “But there are many requirements to doing this and people really need to think about whether this is the best option. You need a minimum size and the assets must qualify in terms of risk, cash flows, and...
location. The track record of the operator is also important. The requirements in terms of growth are very high so you need to have a really strong mother company that is going to fuel the growth of the YieldCo. For private companies like us, there are other questions regarding going public. There are other plays in the market rather than going public yourself. For example, you can form a strategic alliance with someone else’s YieldCo.”

WHAT DOES COHNREZNICK THINK?

January 1, 2017 is firmly fixed in everyone’s mind. From this date, the wind energy PTC might have expired and the solar energy ITC will have been reduced to 10%. While efforts to extend these benefits are ongoing, the industry is also, out of necessity, planning for contingencies. There is no getting away from the fact that the industry will be significantly impacted by a potential reduction and expiration of tax credits. We believe that the future looks bright nonetheless, especially due to the tremendous cost reductions renewable energy has achieved over the past five years.

Another cause for optimism is the maturation of energy storage technology. When deployed at scale, energy storage will unlock one of the greatest barriers to the wider proliferation of renewable energy – grid bottlenecks and instability. California, New York, and Hawaii have already implemented storage initiatives, and others will undoubtedly follow.

Then, there is financial innovation that is enabling the general population to invest in solar projects. For example, utilities like Tucson Electric Power are starting to offer customers the opportunity to invest in community solar projects. This provides an attractive way for homeowners and businesses whose properties cannot house solar panels, to invest relatively small amounts in solar projects.

With what seems like a constant stream of innovation in technology, financing structures and business models, it’s certainly an exciting time to be involved in the renewable energy sector.

If you would like to discuss how any of the themes discussed above impact your business, please contact us to start the conversation.

About CohnReznick: CohnReznick LLP is one of the top accounting, tax, and advisory firms in the United States, combining the resources and technical expertise of a national firm with the hands-on, entrepreneurial approach that today’s dynamic business environment demands. Headquartered in New York, NY, and with offices nationwide, CohnReznick serves a large number of diverse industries and offers specialized services for middle market and Fortune 1000 companies, private equity and financial services firms, government contractors, government agencies, and not-for-profit organizations. The Firm, with origins dating back to 1919, has more than 2,700 employees including nearly 300 partners and is a member of Nexia International, a global network of independent accountancy, tax, and business advisors. For more information, visit www.cohnreznick.com.

About CohnReznick Capital Markets Securities: CohnReznick Cap Markets offers a comprehensive financial advisory platform for the renewable energy industry, providing solutions for tax equity, equity, debt, asset sales or purchases. An affiliate of parent company CohnReznick LLP, the company represents financial institutions, infrastructure funds, strategic participants (IPPs and utilities) and more than 60 wind, solar, biomass and other alternative energy developers nationwide.

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