

THE NEWSLETTER OF THE BDO TECHNOLOGY & LIFE SCIENCES PRACTICE

# CLEANTECH BRIEFING



## BATTERY STORAGE: POWERING CHANGE IN CLEANTECH

By Tim Clackett

**Solar and wind power have been skyrocketing in popularity, particularly as the cost of renewable technologies begins to drop.**

According to the Solar Energy Industries Association, installed solar power has increased by 30 percent in 2014 as residential installations transcended 1 gigawatt in the U.S. As solar panels become more affordable through technology and competition, and consumer awareness of climate change increases, the residential market has proven to be the fastest-growing segment, increasing at least 50 percent every year for the last three years.

Additionally, the U.S. Department of Energy reports that with the help of improved technology, wind power has become more dependable and cost-effective for consumers

and could supply 35 percent of the nation's electricity by 2050. Predicted to save \$14 billion a year by 2050, the U.S. Department of Energy believes the use of wind power could be enormously beneficial economically, and notably offset carbon emissions developed from fossil fuels. Solar now powers the equivalent of 3.5 million American homes, according to the Wind Energy Foundation.

Amid the robust growth of solar and wind, and accelerating local and national energy initiatives, battery storage demand is also growing to allow consumers to utilize and store power when the sun is no longer shining and the wind stops blowing. Considered a "lagging piece of the puzzle" for energy advocates, according to *Bloomberg*, battery storage systems have advantages over other storage systems in their basic design as they are capable of maintaining considerable

### DID YOU KNOW...

According to *Clean Energy Pipeline*, Q1 2015 saw a 12 percent increase in clean energy project financing, up to \$44 billion, due to a recent spike in activity in Asia and South Africa's continued involvement in clean energy investment programs.

The *United Nations Environment Programme* reported that wind and solar received 92 percent of global renewables investment in 2014, dominating other sectors like biofuels and geothermal.

U.S. solar PV installations grew at a compound annual growth rate of over 60 percent from 2009 to 2014, 108 times larger than what the industry was a decade ago, according to *Greentech Media*.

*The Energy Collective* says the surge in renewable energy for the U.S., in combination with technology improvements and lower production costs, has led to declining solar prices, with costs of solar panels declining 89 percent since 2009.

The Environmental Protection Agency's introduction of the Clean Power Plan in June outlines a goal to cut power sector emissions 30 percent lower than 2005 levels by 2030, according to *TechRepublic*.

*Pitchbook* ranked BDO as one of the most active global advisors for PE- and VC-backed buyouts and acquisitions in 2014.

CONTINUED FROM PAGE 1

## POWERING CHANGE IN CLEANTECH

storage capacities by featuring wired cells that can store and release a large amount of power or electricity over long periods of time. This sustainability factor continues to drive greater investments into these systems and lead others to further utilize its capabilities and cost-saving benefits.

One company that has re-emerged into the spotlight with its revolutionary home battery is Tesla, the electric car company. In late April 2015, Tesla introduced a new line of storage batteries that allow users to access energy as needed – on a cloudy day, at night or during a power outage. Using the same lithium-ion battery technology implemented in its cars, Tesla's objective is to transform the battery as we know it to store and release renewable energy, regardless of whether the sun is out or the wind is blowing – enough to power cities and cut down on the use of fossil fuels.

Recently, British vacuum company Dyson also invested \$15 million in a type of battery that could double the life of smartphones and give electric cars the driving ability to reach over 600 miles per charge. Developed by a company called Sakti3, a University of Michigan spinoff, Dyson's partnership aims to highlight the benefits of battery storage for both energy advocates and industries while commercializing the battery itself. For the overall cleantech industry, a breakthrough in battery storage could remove the limitations of adopting renewable energy practices on a large scale.

Although the creation of economical battery storage systems has been slow to develop, there are high expectations for the future of lithium-ion batteries and green energy. According to the U.S. Geological Survey, the request for lithium has seen a significant rise with demand climbing an average of 6.4 percent a year from 2000 to 2012. Companies following the lead of Tesla are finding new ways to source lithium for consumer electronics, energy storage and electric cars. Sustainable materials technology company Simbol Materials, for example, recently released plans to extract lithium from geothermal power plants, which is considered an inexpensive and an environmental friendly process that could mass produce lithium at significantly faster rates.



The movement in battery storage highlights continued optimism in the cleantech industry and promotes opportunities for companies to create innovative and cost-effective storage systems to meet the demanding needs of individuals, homes and corporations. Batteries have the potential to make renewable energy sources predictable and available when and where people need the power. Whether it's for a cell phone or a home, storage continues to drive technology innovation. For the future of clean energy, this is a significant step in the right direction.

*Tim Clackett is a partner and leader of the Cleantech practice at BDO. He can be reached at [tclackett@bdo.com](mailto:tclackett@bdo.com).*

## SUSTAINABILITY SERVICES – ON THE AGENDA OF THE ASB



**As the demand for sustainability reporting expands in the United States, the AICPA continues to receive requests for professional standards to guide practitioners working in this emerging field.**

Consequently, the AICPA has formed a sustainability task force to determine the best solution to meet these demands. Many members of this task force were also members of the task force formed to help author the SOP 13-1 Attest Engagements on Greenhouse Gas Emissions, so they have practical experience working with sustainability information.

At this time, it appears guidance for performing sustainability information services will be housed within the Attestation Standards. These standards are currently in the process of being clarified (similar to the clarification process the private company audit standards underwent a few years ago) and are predicted to be finished later in 2015. The resulting body of literature will have four main chapters, each applicable based on the nature of the service (e.g., examination, review or agreed-upon procedures). Additionally, four subject-matter chapters will be included, which will be applicable to specific subject matters that are frequently the source of attest engagements. It appears that sustainability information services will be a fifth subject matter chapter. Due to the timing of when the sustainability task force was formed and began working on this chapter,

it is anticipated that a final chapter likely will not be finalized until 2016.

It appears that in the future, practitioners will have the option to perform either examinations or review procedures on the sustainability information – two areas currently being vetted by the task force. As the level of assurance provided by the two services is different, the procedures to be performed and the evidence to be gathered will vary. As the area of sustainability reporting is very broad in nature and often deals with emerging areas, the task force is also investigating topics such as:

- Measurement uncertainty and materiality in dealing with various hard-to-measure disclosures
- Use of specialists in sustainability engagements
- The meaning of “presents fairly” in situations where the underlying sustainability reporting framework offers up little to no guidance as to disclosure requirements

As the field of sustainability reporting varies significantly depending on the subject matter, the task force is attempting to create “framework-neutral guidance, applicable and understood regardless of the sustainability.” As the resulting chapter is bound to be non-prescriptive in nature, it is clear that individuals’ professional judgment will be required in performing these services. We will provide further updates on the work of this task force as it progresses.

## TIECON 2015 RECAP: BEST PRACTICES FOR MANAGING EQUITY IN TECHNOLOGY STARTUPS

At TiEcon 2015 in Silicon Valley in June, Aftab Jamil, partner and leader of BDO’s Technology & Life Sciences practice, moderated a panel discussion on the topic of “How Not to Mess Up your Cap Tables,” featuring Marc Gottshalk (partner at Sidly LLP and co-founder of Cleantech Open), Naeem Zafar (co-founder and CEO of Adoline), and Stan Pierson (partner and leader of the Corporate and Securities practice at Pillsbury Law Group).

TiEcon is the largest professional and networking conference for entrepreneurs and is held annually by The Indus Entrepreneurs (TiE), which has 11,000 members in 60 chapters across 17 countries. TiE’s mission is to foster entrepreneurship globally through mentoring, networking and education of entrepreneurs. BDO has been a longtime supporter of entrepreneurship, and several BDO professionals are involved in making a positive contribution toward the education of young and emerging companies on topics essential for growth-oriented businesses throughout the country.

Discussing the importance of managing a company’s equity, ownership and corporate governance structure, Aftab and the panelists provided key insights for entrepreneurs navigating the basics of various financing alternatives and the critical steps that must be taken and questions that must be answered to protect shareholders’ value:

- **What are cap tables and why are they important?** Cap tables are documents defining ownership of an entity and how the ownership stakes are allocated in any business entity. It is important to sort out

CONTINUED FROM PAGE 3

**TIECON 2015 RECAP**

the allocation of ownership stakes right at the beginning of a business venture, especially when co-founders are coming together to form a new entrepreneurial entity – helping outline goals and incentives while highlighting company objectives going forward. Lack of clear division of rights and responsibilities can cause significant friction between key stakeholders, leading to diversion of attention from mission critical business goals.

- **What are the pros and cons of various classifications on the cap table?** As a start-up idea takes shape and investment is needed to take the company to the next stage, venture capitalists or angel investors come into the picture. Choosing the right type of equity to sell to such investors can make a big difference in the future control of the company and the ability of entrepreneurs to protect their value, while simultaneously having available equity to offer employees as an incentive to move up on the curve of innovation and product development.

- **What are some best practices for approaching a term sheet from external investors such as venture capitalists?** Seek legal advice early to help decipher the main categories of a term sheet: valuation, economics, control and the founder's treatment. Other key considerations to keep top-of-mind include liquidation preferences and the participation rights of various categories of stock of an entity, especially if a liquidity event or a merger transaction takes place.

- **What's the best way to approach VCs for funding?** Know your company's direction and focus, make sure you have conducted necessary due diligence, and ensure proper assignment of intellectual property.

The journey of an entrepreneur is not an easy one. But perseverance, coupled with a strategic approach to equity, will position entrepreneurs for success and future growth. Maintenance of clean cap tables requires organizational discipline and focus. Misdirection and a lack of focus can lead to valuation erosion, among other mistakes. But the key consideration is that we must all suffer one of two things: the pain of discipline or the pain of regret or disappointment.

## RENEWABLE ENERGY: A SPOTLIGHT ON CLEAN ENERGY INCENTIVES

By Daniel Fuller



### Tax incentives for energy conservation first appeared in the same legislation that established the modern income tax in 1913.

Although income tax is a congressional constant, green energy incentives ebb and flow with political and economic tides. President Obama supports making permanent multiple provisions for green energy and has included these in his proposed budgets. However, bill H.R. 1901 was introduced in March, which could eliminate the Production Tax Credit (PTC). U.S. Representative and co-author Kenny Marchant states, "The PTC has ballooned from a temporary boost for energy innovation into a massive special-interest handout for the now multibillion-dollar wind industry." While the mood on Capitol Hill may be murky, there are still paths to greener tax pastures for renewable energy companies and investors.

### Section 45 Renewable Electricity Production Tax Credit (PTC)

In December 2014, the *Tax Increase Prevention Act of 2014* extended the expiration date for this tax credit to Dec. 31, 2014. Projects

that were not under construction prior to Jan. 1, 2015, are ineligible for this credit. In March 2015, IRS Notice 2015-25 extended the Continuous Construction Test and Continuous Efforts Test (used to determine if a project commencing construction before the end of 2014 is eligible for the PTC) by one year to Jan. 1, 2017. This credit is applicable for electricity production facilities utilizing biomass, geothermal, hydropower, marine and hydrokinetic, municipal solid waste, small irrigation or wind power. This credit is based on a fixed amount per-kilowatt-hour of electricity produced – 2.2 cents for wind, geothermal, or closed-loop biomass and 1.1 cents for other eligible technologies. Taxpayers can take the credit for a 10-year period beginning on the date the facility is placed in service (this time frame is reduced to five years for geothermal energy, small irrigation and municipal solid waste facilities).

### Section 48 Business Energy Investment Tax Credit (ITC)

An alternative to the PTC is the Section 48 Business Energy Investment Tax Credit (ITC), which is a credit based on the tax basis of the energy property placed into service by Dec. 31, 2016: 30 percent for Solar Water Heat,

CONTINUED FROM PAGE 3

## CLEAN ENERGY INCENTIVES

Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Solar Photovoltaics, Wind (All), Municipal Solid Waste, Fuel Cells using Non-Renewable Fuels, Tidal, Wind (Small) and Fuel Cells using Renewable Fuels; 10 percent for equipment producing or distributing geothermal energy, equipment that uses the ground or groundwater to heat or cool a structure, qualified microturbines, or combined heat and power systems. In an attempt to provide more certainty around subsidies for PTC-qualified energy facilities, legislation was passed in 2009 allowing certain PTC facilities to opt instead to take ITC.

### Monetization Strategies for Energy Credits

The primary strategy used by developers and tax equity investors to own and operate renewable energy projects eligible for the PTCs and ITCs is the “partnership flip” structure (see the illustration below). Under this structure, the entity that directly owns the renewable energy property is required to be taxable as a partnership for federal income tax purposes because current federal tax law mandates that federal income tax credits and depreciation tax deductions cannot be sold. Therefore, instead of buying federal income tax benefits, a federal tax credit investor would literally invest cash, in the form of a contribution to the partnership, in exchange for a capital and profits interest in the partnership. As a result, each partner/owner of the underlying partnership property is allocated his or her respective share of partnership tax benefits, which can include income, gain, deductions,

loss and tax credits. With an ITC and the partnership structure, the partner receiving the investment tax credit benefits must be a partner in the project entity prior to the project being placed in service for federal income tax purposes.

In the flip structure there is either a General Partner (GP) or Managing Member who is typically the project sponsor and manager, and one or more separate Limited Partners (LP) or Investor Members who are primarily motivated to obtain state tax credits (if any exist). In most cases, there will also be a separate “federal investor” who is primarily motivated to obtain federal tax benefits. Investors often evaluate their level of investment in terms of a target yield. That yield is then compared to other investments that investors might make or to the percentage of project cost that is expected to be covered by their tax equity investment.

The GP or project sponsor could be the project developer as well. The sponsor may or may not have the right to earn a developer fee for his or her efforts as both the project sponsor and business manager of the project. The lender, if any, is typically an unrelated third-party financial institution.

Project capital costs are covered, therefore, by a combination of sponsored equity, tax investors (the “tax equity”), equity raised from state tax credit investors, state or local grants, rebates, subsidies, etc.; and sales (including pre-sales) of renewable energy certificates or carbon offsets or heat or power. The balance

of construction sources are typically made up with debt.

The ITC also contains recapture provisions that apply to an underlying energy property that is disposed of or otherwise ceases to be energy property with respect to the taxpayer before the end of its five-year recapture period (starting from the year the property was placed in service). The ITC vests at 20 percent per year over the five-year recapture period.

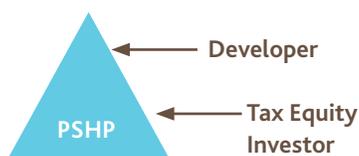
A variety of actions may result in recapture. First, the sale of a partnership interest or shifting allocations may be dispositions subject to recapture. Moreover, the interest reduction rule states that recapture is required if a partner's interest in the partnership is reduced by a sale to less than two-thirds of what it was when the ITC was claimed. The two-thirds reduction rule stays in effect during the five-year recapture period and a proportionate amount of the credit is subject to the recapture calculation. Recapture may also occur if there is a reduction in the taxpayer's amount at risk or if there is an increase in non-recourse financing during the five-year period.

Companies should consult their tax advisor regarding these transactions, as partnership allocations must have substantial economic effect. The IRS has also issued Revenue Procedure 2007-65, which is specific to wind and sets a safe harbor for taxpayers. Although the ruling only applies to wind power, most participants are comfortable applying its principles in the solar context.

### Partnership Flip Illustration

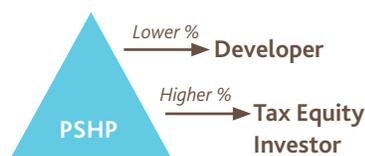
#### FORMATION:

- The Tax Equity Investor's contribution is derived based on anticipated return:
  - Cash
  - Tax Credits
  - SALT Incentives
  - Depreciation Deductions



#### YEAR 1:

- Tax Equity Investor receives substantial percentage of:
  - Cash
  - Tax Credits
  - SALT Incentives
  - Depreciation Deductions



#### AFTER RATE OF RETURN IS ACHIEVED:

- The partnership allocations “flip” to previously agreed upon percentages
- Developer has option to purchase Equity Investor's interest in the partnership



CONTINUED FROM PAGE 5

**CLEAN ENERGY INCENTIVES****Sale-Leaseback Illustration**

- The developer sells eligible equipment to Tax Equity Investor at retail
- Tax Equity Investor subsequently leases back to developer
- Tax Equity Investor benefits by reaping tax credits, SALT incentives, depreciation deductions, and payments
- Tax Equity Investor:
  1. Responsible for all capital infusion
  2. Calculates lease payments to achieve return
- Developer: responsible for maintenance on equipment
- Developer sells energy to utility
- Payments are mandatory regardless of profitability or revenue streams
- Buy out option usually exists at conclusion of lease



The other common strategy is a sale-leaseback in which the lessor obtains tax-invested capital (see the illustration above). In this structure, the tax investor is the owner/lessor and, as such, is entitled to the credits and depreciation. The tax investor further benefits by being able to mitigate operations risks by locking in purchase price and stream of rental payments. The developer is able to receive up-front proceeds from the sale of property while transferring full ownership of the property; however, the transaction must occur within 90 days of the original placed-in-service date.

One of the advantages of a sale-leaseback structure is that it largely insulates the investors from operations risks by placing a barrier between the project ownership and the project operations. On the other hand, it costs more for the developer to get the project back. After the lease ends, the developer can only continue using the project by purchasing it from the investor at fair market value.

Tax incentives are essential to the deployment of solar energy in the U.S. As developers prepare to introduce clean and renewable energy projects, they will also want to

combine novel technology, stable returns and secured financing through tax equity investments, traditional financing or a combination of the two. Developers will be able to position themselves for success if they implement a solid business plan and ensure they have a firm understanding of the available tax equity options for additional certainty in their business' future.

*Daniel Fuller is a tax partner in BDO's Grand Rapids office. He can be reached at [dfuller@bdo.com](mailto:dfuller@bdo.com).*

# Perspective in CLEANTECH



**Cleantech investment last peaked in 2007, when favorable climate**

**change policies and high oil prices led institutional venture capital (VC) firms to spend \$150 billion on clean technologies, according to the Colorado Cleantech Industries Association (CCIA). However, the recession brought some lean years where capital was concerned – and the discovery of shale oil and natural gas reserves, coupled with the collapse in the price of oil, took the urgency out of replacing existing energy modalities.**

In 2015, clean energy investment in the first quarter of the year slumped to its lowest level in two years globally – and dropped 15 percent year-on-year, according to data from Bloomberg New Energy Finance. Cleantech investment dropped significantly in Brazil, Europe and China, but South Africa and India saw big increases as they sought to expand power capacity and leverage domestic solar and wind resources.

“Although there have been recent declines in investment, we still see an overall positive outlook for clean technologies and, in renewable energy in particular, there is subsector growth in areas such as storage and smart grid technologies,” said **Tim Clackett, partner with BDO’s Technology & Life Sciences practice**. “Additionally, water shortages in the U.S. have focused attention on innovation and conservation, and this is still a vibrant business sector.”

Additionally, IPOs have been thin on the ground in recent years. Cleantech startups require a longer time frame, bigger budget and different investor skill sets than IT startups, according to *Green Tech Media*. Just one cleantech company went public in the first quarter of 2015 – Tel Aviv-based SolarEdge Technologies, which raised \$126 million in its IPO and has performed well since. Previous backers included a number of VC funds and General Electric’s GE Energy Financial Services unit, according to *Bloomberg*. The fact the firm was already turning a profit when it filed for an IPO made it something of an outlier, according to *Forbes*.

However, despite these unfavorable statistics, investor interest may be picking up again in early-stage cleantech companies requiring capitalization to scale up, according to the CCIA. VC firms are looking at a variety of technologies from air and water monitoring software to smart buildings and recycling technologies – but they are looking for experienced management teams and are avoiding companies with complicated investor pools and tax situations, and low-margin, long-return horizons, the CCIA reports. VC funds also now face competition from private equity, angel investors, family groups and global corporations looking to make strategic, socially conscious investments. For example, Goldman Sachs is devoting \$40 billion to cleantech over the next decade, according to the CCIA.

Solar power is one of the brightest stars of clean technology. As solar technology has matured and prices for solar panels have come down, solar-powered electricity is increasingly being

integrated into the traditional grid. Solar companies saw record fundraising in the first quarter of 2015, with \$6.4 billion in total global corporate funding, according to *AltEnergyMag.com*. This was almost twice the \$3.4 billion raised in the previous quarter. The largest solar-related VC deal in Q1 of this year was the \$45 million raised by solar-downstream company Conergy, from RWE Supply & Trading and Kava Capital Management, *AltEnergyMag.com* reports.

M&A activity in the solar sector is also robust, with 50 deals spread over the last two quarters, and with a heavy concentration in small, solar downstream companies. The largest disclosed deal by dollar amount was the \$265 million acquisition of Recurrent Energy, a solar project developer, by Canadian Solar, according to *AltEnergyMag.com*.

Whether the cleantech boom times will return remains to be seen, but there are still plenty of dealmaking opportunities – especially involving solar downstream companies, and companies making software and electronics products designed to enhance and increase the output of existing technology.

*Perspective in Cleantech is a feature examining the role of private equity in clean technology.*

## MARK YOUR CALENDAR...

The following is a list of upcoming conferences and seminars from the leading technology associations and business bureaus:

### JULY 2015

July 29-30

#### EV Roadmap 8

World Trade Center

Portland, Ore.

### AUGUST 2015

Aug. 17-19

#### International Conference on Smart Energy Grid Engineering

University of Ontario Institute of Technology

Oshawa, Canada

Aug. 24-26

#### Asia Pacific Resilience Innovation Summits & Expo

Hawaii Convention Center

Honolulu, Hawaii

### SEPTEMBER 2015

Sept. 14-17

#### Solar Power International 2015 (SPI)

Anaheim Convention Center

Anaheim, Calif.

Sept. 15-16

#### Water Expo 2015

Miami Airport Convention Center

Miami, Fla.

## CONTACT:

TIM CLACKETT

Los Angeles

310-557-8201 / [tclackett@bdo.com](mailto:tclackett@bdo.com)

SLADE FESTER

Silicon Valley

408-352-1951 / [sfester@bdo.com](mailto:sfester@bdo.com)

HANK GALLIGAN

Boston

617-422-7521 / [hgalligan@bdo.com](mailto:hgalligan@bdo.com)

PAUL HEISELMANN

Chicago

312-233-1876 / [pheiselmann@bdo.com](mailto:pheiselmann@bdo.com)

AFTAB JAMIL

Silicon Valley

408-352-1999 / [ajamil@bdo.com](mailto:ajamil@bdo.com)

RYAN STARKES

Woodbridge

732-734-1011 / [rstarkes@bdo.com](mailto:rstarkes@bdo.com)

DAVID YASUKOCHI

Orange County

714-913-2597 / [dyasukochi@bdo.com](mailto:dyasukochi@bdo.com)

## BDO TECHNOLOGY & LIFE SCIENCES PRACTICE

BDO is a national professional services firm providing assurance, tax, financial advisory and consulting services to a wide range of publicly traded and privately held companies. Guided by core values including competence, honesty and integrity, professionalism, dedication, responsibility and accountability for 100 years, we have provided quality service and leadership through the active involvement of our most experienced and committed professionals.

BDO works with a wide variety of technology clients, ranging from multinational Fortune 500 corporations to more entrepreneurial businesses, on myriad accounting, tax and other financial issues.

BDO is the brand name for BDO USA, LLP, a U.S. professional services firm providing assurance, tax, financial advisory and consulting services to a wide range of publicly traded and privately held companies. For more than 100 years, BDO has provided quality service through the active involvement of experienced and committed professionals. The firm serves clients through 63 offices and more than 450 independent alliance firm locations nationwide. As an independent Member Firm of BDO International Limited, BDO serves multi-national clients through a global network of 1,328 offices in 152 countries.

BDO USA, LLP, a Delaware limited liability partnership, is the U.S. member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms. BDO is the brand name for the BDO network and for each of the BDO Member Firms. For more information please visit: [www.bdo.com](http://www.bdo.com).

Material discussed is meant to provide general information and should not be acted on without professional advice tailored to your firm's individual needs.