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2014 Alternative
Energy Seminar
Paving the Way
for Growth

Deloitte Center
for Energy Solutions

Retrospective





The Deloitte Center for Energy Solutions hosted the 2014 Deloitte Alternative Energy Seminar in Dallas, Texas, September 29 – October 1, 2014. With the theme “Paving the Way for Growth,” the Seminar examined the many ways in which the sector is creating opportunities for expansion and what may affect its growth trajectory in the future.

The Seminar brought together executives, researchers, entrepreneurs, and investors from around the world to exchange ideas for navigating the many opportunities and challenges facing the sector, including those associated with technological advances, financing structures, policy shifts, and a changing utility business model. It enabled participants to explore broad trends, such as the alternative energy landscape, the evolution of renewables into a mainstream asset class, and opportunities behind, as well as in front of, the meter. It also allowed them to enhance their professional knowledge by delving into complex tax, finance, and accounting topics such as partnership flip structuring and using hedge accounting to better reflect risk mitigation strategies. Participants had the opportunity to experience progress within the sector firsthand via a tour of NextEra Energy’s Wolf Ridge Wind Energy Center in Cooke County, Texas.

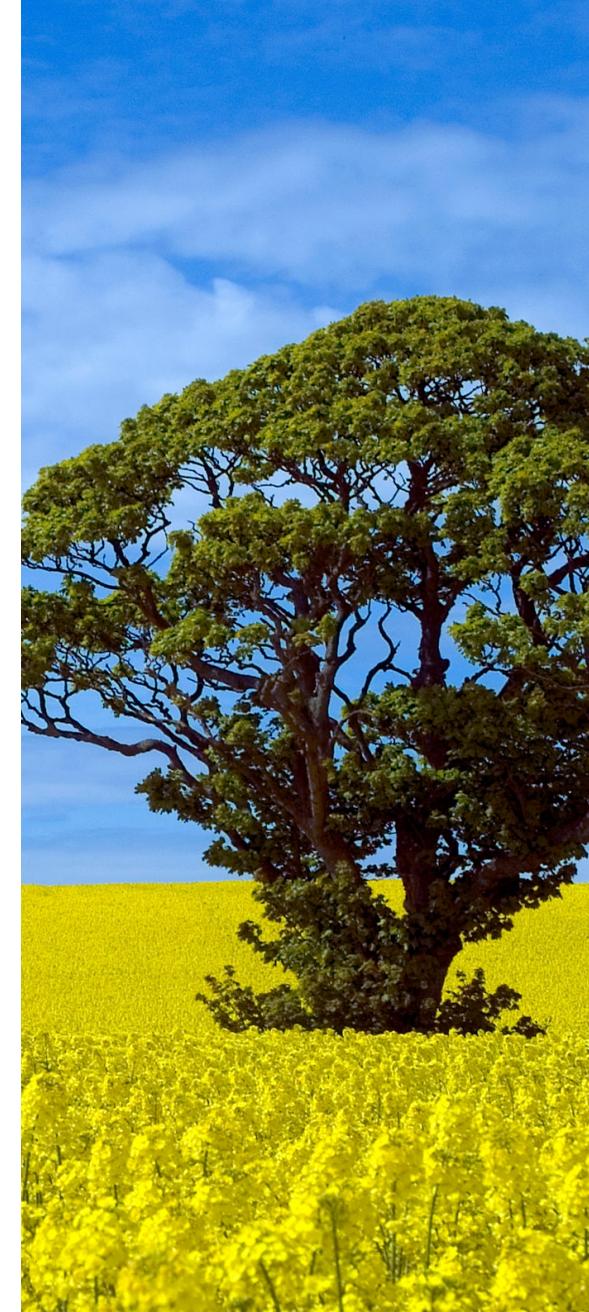
This retrospective provides a snapshot of the memorable themes and insights from the event, along with links to other Seminar materials.

Click on one of the boxes below to get started.



Overview of Seminar Themes

- Renewables have become a widely understood asset class. Along with the maturation of the sector come questions about the implications for the traditional utility business model. These include considerations about rate design and compensation structures and the role traditional utilities should play in upgrading and maintaining the electrical grid.
- Federal tax reform appears to be unlikely in the short term, but incentives, particularly the production tax credit (PTC) for wind, will almost certainly expire at some point in the future. Modeling for this scenario now is critical for smoothing the transition and paving the way for continued growth.
- Transformation is coming to the United States electric industry, generating opportunities for both new entrants and current participants. While traditional utilities appear to be well positioned to compete in front of the meter, they need greater clarity from regulators about the products and services they are permitted to offer behind it so they can adapt their business models accordingly.
- The term “renewables” today often connotes the leading subsectors of wind and solar. This connotation is rapidly becoming too narrow. Technologies are maturing, and markets are expanding throughout the alternative energy sector, paving the way for growth in biofuels, waste-to-energy, microgrids, energy storage, advanced electric vehicles, energy management, and more.
- Alternative energy development is facing new headwinds today from intensifying competition, particularly within utility-scale solar, and difficulty in obtaining long-term power purchase agreements (PPAs). The solar and wind subsectors have been responding positively to these challenges by improving efficiencies and driving down costs, thus further improving their cost-competitiveness.
- The alternative energy sector is advancing, and so are the deal structures and financing mechanisms propelling it. While both developers and investors will need to adjust their expectations as competition increases and incentives change, it is likely capital will continue to flow into solid projects. This capital is expected to come from an increasingly broad array of investors, ranging from banks and institutional investors to public markets and government agencies.
- Advancements in energy storage technologies could potentially take renewable energy to a whole new level. By addressing challenges associated with output variability and intermittency, technologies such as flywheels, molten salt storage, and advanced battery storage are eliminating many of the technical barriers to integrating renewables into the existing electrical grid as well as to incorporating them into microgrids and self-generation solutions.



Overview



Plenary sessions



Elective sessions – *Featured Topics*



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Concluding Perspectives



Plenary Sessions

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Behind the Meter — The Utility Perspective

Alternative Energy Development — What Does the Future Hold?

Waste-to-Energy: Potential in the Renewable and Alternative Energy Space?

The US Department of Energy and Renewables — History and Future Opportunities

Financing the Growth of Alternative Energy

The Impact of Self-Generation and Microgrids



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Plenary sessions



Elective sessions – *Featured Topics*



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Concluding Perspectives



Alternative Energy Landscape

Alternative energy is hitting its stride. "Leading segments of the industry have become mature," stated John McCue, vice chairman, US Energy & Resources leader, Deloitte LLP, "and now is the time to build on that foundation for growth." While perceptions differ regarding what constitutes a "mature" industry, few would argue that continuing adoption of renewables is fundamentally changing the game for stakeholders throughout the energy value chain. And since the energy game is changing, some believe it is time to change the nomenclature. "Today, renewables are not an alternative," stressed Michael Brower, president and CEO, American Council on Renewable Energy (ACORE). "They're a 'real deal' asset class with the proven ability to hedge fuel costs and provide scalable, low-cost, power," he continued.

Mr. Brower further noted the mainstream acceptance of renewables is driving down costs and spurring a true revolution in the power and transportation sectors. For instance, he pointed out wind power has generally attained grid parity from Texas through the middle of the country to the Canadian border; the cumulative solar photovoltaic (PV) and concentrating solar power (CSP) capacity in the United States has exceeded 15.9 gigawatts (GW) or enough to power 3.2 million homes¹; and Tesla Motor's gigafactory, which is one of the biggest construction projects in the world, has the potential to finally unlock the economics of energy storage—and in so doing, to elevate the game to a whole new playing field.

However, what does embracing renewables as an asset class really mean? Few, if any, presently know. While acknowledging "transformation is coming" to the electric industry, Christine Tezak, managing director, Research, ClearView Energy Partners, noted, "Many questions remain about whether we're managing this transition properly." As distributed generation proliferates within the utility marketplace, some of the outstanding concerns include whether or not rooftop solar PV is having an adverse impact on certain customer classes, and if the rate and compensation structures are fair to customers and utility stakeholders as well as sufficient to keep the electrical grid healthy.

Difficult questions such as these are not the only obstacles emerging within the alternative energy landscape. The terrain is also being shaped by policy uncertainty and the potential for federal tax reform, which would likely eliminate federal tax incentives for solar and wind power. Jonathan Traub, managing principal, Tax Policy Group, Deloitte Tax LLP, expressed his view that Congress is unlikely to enact tax reform in the short term, although he believes it will happen eventually. In its absence, he believes supporters and detractors of the PTC for wind may strike a compromise: extending it for another year, but adopting a rule requiring projects to be "placed in service," not "begin construction," by the qualification deadline.

"The viability question is no longer on the table; the question now is, how can we best manage the integration of renewables?"

Christine Tezak, Managing Director, Research, ClearView Energy Partners, LLC

Featured Speakers: (from left to right)

Jonathan Traub, Managing Principal, Tax Policy Group, Deloitte Tax LLP

John McCue, Vice Chairman, US Energy & Resources Leader, Deloitte LLP

Michael Brower, President and CEO, ACORE

Christine Tezak, Managing Director, Research, ClearView Energy Partners, LLC



¹ Greentech Media, "US Solar Nearing 16 GW of Installed Capacity," posted September 4, 2014, <http://www.greentechmedia.com/articles/read/US-Solar-Industry-Nears-16-GW-of-Installed-Capacity>



Overview



Plenary sessions



Elective sessions – *Featured Topics*



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Concluding Perspectives



Behind the Meter — The Utility Perspective

Driven largely by growth in distributed generation, flat electricity demand, and customer expectations of environmental responsibility, disruption to the traditional electric industry business model is now widely perceived to be inevitable. Many contend these disruptive challenges also present opportunities for regulated utilities to participate in the transformation. But where do these opportunities lie? And how can a “win-win-win” solution be created for regulated utilities, the customers within their service territories, and distributed energy providers?

In searching for this winning trifecta, speakers quickly focused on the electric grid. “The main opportunity being overlooked is the significant investment that will be needed to upgrade the grid,” observed James Tong, vice president, Strategy and Government Affairs, Clean Power Finance. In his view, the grid evolving into a marketplace for facilitating transactions among the participants in the electricity value chain. This shift will cause stakeholders to value the grid more. Furthermore, utilities inherently have an advantage in maintaining the transmission and distribution system since they already have the experience and skilled workforce, making it difficult for new entrants to compete.

Regarding grid maintenance, and particularly the question of who should pay for it, speakers cautioned the current controversy around net-metering may be distracting people from the underlying issue: outdated rate design based on the faulty premise of continuously increasing demand. As Norrie

McKenzie, vice president, Renewable Energy Development, Georgia Power Company, explained, many utilities are still attempting to recover a large portion of their substantial fixed costs via a variable rate component. This structure, he asserted, is untenable.

Jeff Guldner, senior vice president, Public Policy, Arizona Public Service Company, maintained a similar view that the underlying rate design needs to be changed. In doing so, he suggested policy makers should consider fairness in offsetting cost-shifting to nonsolar customers; transparency in rates and incentives; and long-term sustainability in accommodating future growth in distributed generation.

While speakers agreed utilities are well positioned to participate in front of the meter, they differed in their views of the breadth and depth of opportunities existing behind it. Some of this uncertainty stems from lack of clarity concerning what regulated utilities would be permitted to do within their service territories. For instance, could they offer distributed-generation services or ancillary products such as energy management systems and home automation technologies? The same question applies to their unregulated affiliates as it is often unclear to what extent they would be allowed to do business in the geographies where the parent company has regulated operations. “It gets trickier behind the meter from a regulatory perspective,” commented Mr. Tong. Speakers contended utilities need to know the boundaries—and they need to know them soon—so they can move forward more aggressively in adapting their business models.

“The underlying issue of fixing the rate design is the most important thing we have to do to ensure distributed energy is sustainable.”

Jeff Guldner, Senior Vice President, Public Policy, Arizona Public Service Company

Featured Speakers: (from left to right)

Jeff Guldner, Senior Vice President, Public Policy, Arizona Public Service Company

Norrie McKenzie, Vice President, Renewable Energy Development, Georgia Power Company

Gregory E. Aliff, Vice Chairman and Senior Partner, Energy & Resources, Deloitte LLP

James Tong, Vice President, Strategy and Government Affairs, Clean Power Finance



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Elective sessions – *Featured Topics*



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Concluding Perspectives



Alternative Energy Development — What Does the Future Hold?

Over the last decade, a series of progressive developments in the regulatory, financial, and technology arenas has propelled alternative energy forward, despite vacillating US tax policy and the criticisms of naysayers regarding intermittency. However, today the industry faces new kinds of headwinds, which could potentially impede progress.

Speakers identified intensifying competition, particularly in utility-scale solar development, as one of the countervailing forces they must now overcome. Another is increasing difficulty in obtaining long-term PPAs. Speakers explained these have become fewer and farther between as a result of low natural gas prices, already-attained renewable portfolio standards, and improvements in energy efficiency, which have cut into power demand. These forces are making it harder to obtain financing. “An environment where a request for proposal for 200 megawatts is over-subscribed six times results in extremely low returns,” observed Andrew Flanagan, vice president, Asset Management & Development, Infigen Energy.

Nonetheless, Mr. Flanagan and others stressed the market is adapting to these challenging conditions. For instance, manufacturers and contractors are driving out costs, and developers are increasingly working together to pool smaller projects in an effort to access more efficient financing sources such as pension funds, trusts, infrastructure funds, and investor-owned utilities.

With the industry’s wholesale movement toward greater efficiency, Diana Rivera, director of Market Development and Regulatory Affairs, Clean Line Energy Partners LLC, observed the delivered cost of wind power is already quite competitive with fossil-fuel generation in many areas of the United States, even

when transmission costs are added on. Moving ahead, she anticipates the economics of wind power to improve even further. She also expects expanded opportunities for wind developers related to the Clean Power Plan proposal from the US Environmental Protection Agency, which aims to reduce carbon emissions from existing power plants.²

While wind power boasts improving cost-competitiveness, solar is not to be outshined. As Peter Marte, CEO, Hannah Solar, emphasized, some solar developers are finding growth opportunities in contracting directly with cash-rich commercial customers who want to hedge their energy costs over the long term. Tim Rosenzweig, CFO, SolarReserve, also sees opportunities in building out utility-scale solar projects outside the United States in places where electricity prices are high, such as Latin America and South Africa. This allows developers to drive down the levelized cost of energy and establish the value of emerging technologies, such as CSP with molten salt storage, thus paving the way for reentering the US market when power prices increase.

Some contend even the prospect of tax credits going away does not severely cloud the overall long-term outlook for the renewables sector. “When you look at the levelized cost of energy improvements of PV and wind, which are based upon years of supply chain improvements and research and development investment, these renewable segments will reach grid parity without subsidies in the long run.” Mr. Rosenzweig further added that it is also important to note that fossil fuels continue to benefit from other forms of subsidies, which aren’t available to wind and solar energy companies.

“The declining cost of wind power is a key trend to highlight.”

Diana Rivera, Director, Market Development and Regulatory Affairs, Clean Line Energy Partners LLC

Featured Speakers: (from left to right)

Tim Rosenzweig, CFO, SolarReserve

Peter Marte, CEO, Hannah Solar, LLC

Brian Boufarah, Partner, Deloitte & Touche LLP

Andrew Flanagan, Vice President, Asset Management & Development, Infigen Energy

Diana Rivera, Director, Market Development and Regulatory Affairs, Clean Line Energy Partners LLC



² EPA News Release, “EPA Proposes First Guidelines to Cut Carbon Pollution from Existing Power Plants,” Release date June 4, 2014, <http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceac8525735900400c27/5bb6d20668b9a18485257ceb00490c98!OpenDocument>



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Plenary sessions



Elective sessions – *Featured Topics*



Elective sessions – *Technical Topics*



Concluding Perspectives



Waste-to-Energy: Potential in the Renewable and Alternative Energy Space?

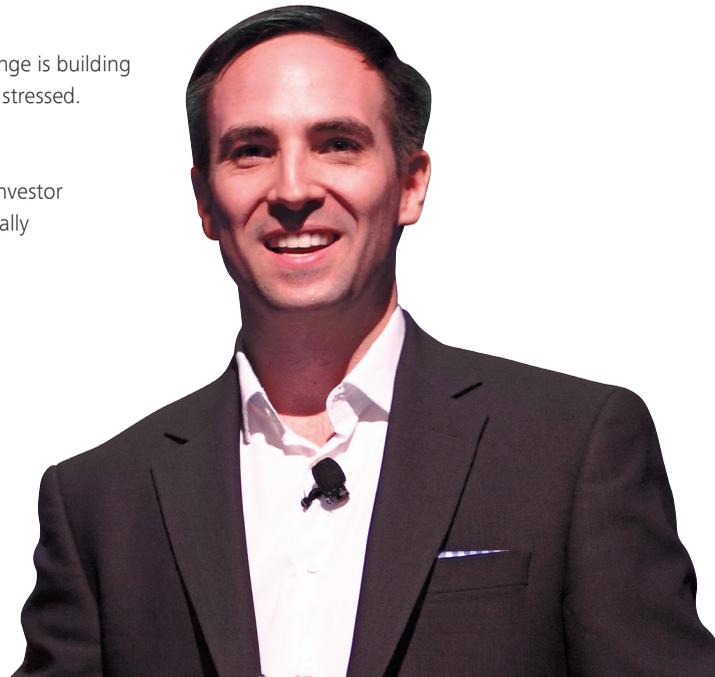
Waste Management is a Fortune 200 company and the largest solid waste company in the United States. It is also a hidden alternative energy player. As Roy Johnston, director, Corporate Venturing, Waste Management Inc., explained, technological advances, coupled with sustainability demands from customers and regulators, are increasingly making it possible—and profitable—to unlock the energy potential within the US waste stream.

Mainly trapped within discarded paper, plastic, wood, food, and yard trimmings, the annual energy potential of the US waste stream is estimated to be about 2.6 quadrillion British Thermal Units, or about three percent of US energy consumption.³ This might not sound like a lot on the surface, but if fully realized, Mr. Johnston asserted it would add about 25–30 percent to the renewable energy base that exists today.⁴ He also stressed using waste as a feedstock has other benefits: Because trash is a societal burden, turning it into something beneficial generates some useful by-products, such as enhanced sustainability from reducing the need for landfills, and avoided costs and emissions associated with moving the materials.

Mr. Johnston explained that several demonstrated “bioenergy” technologies are widely deployed today with many more approaching commercialization. Already in widespread use are power plants that burn methane gas from landfills; waste-to-electricity incinerators; fats, oil, and gas processors that produce biofuels; and anaerobic digesters and pyrolysis systems that generate renewable synthetic gases. In terms of emerging technologies to watch, he pointed to increasingly sophisticated gasification systems, which convert huge quantities of unsorted waste into a variety of synthetic gases, and engineered-fuel systems, which produce solid fuels from shredded nonrecyclable plastics and cellulosic materials.

In moving ahead, Mr. Johnston noted most developers are focusing on the “technology black box.” However, he believes the real challenge is building the supply chain. “You have to start thinking of waste not as something you throw away, but as a feedstock for a chemical process,” he stressed. “In other words, how do you get the right quantity of the right quality material to the right place?”

The challenges of building an efficient supply chain, finding off-takers, and managing regulatory and commodity risks have dampened investor enthusiasm for waste-to-energy projects in the last couple of years. Nonetheless, Mr. Johnston remains optimistic. In his view, economically viable waste-to-energy businesses can still be created by forging partnerships with companies that have logical, easy-to-monetize ways of serving a customer need.



“Technologies continue to develop, but creating new supply chains and business models, rather than pure technical efficacy, are the main challenges.”

Roy Johnston, Director, Corporate Venturing, Waste Management, Inc.

³ US Environmental Protection Agency, US Energy Information Administration, and Waste Management.

⁴ Ibid.



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Elective sessions – *Technical Topics*



Concluding Perspectives



The US Department of Energy and Renewables — History and Future Opportunities

Traversing the “Valley of Death,” or passing safely through the gap between pilot demonstrations and full commercialization, is frequently the biggest hurdle for developers of clean energy technologies. At first glance, this chasm may seem like a lonely place, but help is available—if you know where to look.

When searching for project financing, the Loan Programs Office (LPO) of the US Department of Energy should be on the radar. Having financed Tesla, the Ivanpah Solar Electric Generating System, and dozens of other ground-breaking projects, the LPO has \$40 billion in remaining loan authority earmarked for accelerating the deployment of clean energy projects and advanced vehicle manufacturing facilities in the United States. The LPO, explained Peter Davidson, executive director, Loan Programs Office, US Department of Energy, was set up to provide senior debt loan capital for the first three commercial deployments of a new technology in the United States. The overall objective is to catalyze financing from the private sector, which is often only available after the technology has reached commercial maturity.

The LPO conducts due diligence and underwrites each loan in a manner similar to a commercial lender. While several “areas of interest” have been defined, eligible projects generally must:

- Utilize new or significantly improved technologies or systems
- Reduce, avoid, or sequester greenhouse gases
- Be located in the United States, but may be foreign owned
- Be able to repay loan principal and interest

“The government can play a vital, catalytic role in bringing new technologies to market by demonstrating they work to the commercial finance sector,” stressed Mr. Davidson. To learn more about the LPO or to apply online, interested parties may visit www.energy.gov/lpo.



“We’re in the business of creating new energy industries.”

Peter Davidson, Executive Director, Loan Programs Office, US Department of Energy



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Elective sessions – *Featured Topics*



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Concluding Perspectives



Financing the Growth of Alternative Energy

The US Energy Information Administration projects that wind power capacity will increase by 8.8 percent in 2014 and 16.2 percent in 2015.⁵ Meanwhile, it anticipates utility-scale solar capacity to double between the end of 2013 and the end of 2015, with customer-sited PV capacity expected to exceed utility-scale additions within the same time frame.⁶ With so much development expected in the near future, the subject naturally turns to: Where will the capital come from and what will the financing look like?

The challenge it seems is not a dearth of resources. As Mit Buchanan, managing director, Energy Investments, JPMorgan Capital Corporation, pointed out, money is typically available for good large projects. Instead, she and other speakers asserted the primary challenge lies in finding cost-efficient ways of financing distributed generation, which is where they believe the primary growth will occur. Solar projects in the residential as well as commercial and industrial (C&I) markets tend to be small in the eyes of major banks and private equity firms, who prefer to invest in sizeable tranches to obtain economies of scale. While there is still room to improve, speakers noted residential solar developers have made good progress in standardizing contracts and pooling their assets to appeal to institutional investors and the

public markets. However, in the C&I arena, George Revock, managing director, head of Alternative Energy and Project Finance, Capital One, maintained the prevalence of multiple, nonstandardized PPAs and the associated level of due diligence required are still too much for many large investors to manage cost-effectively. Yuri Horwitz, CEO, Sol Systems, agreed with this assessment, pointing to “the trough between utility-scale and residential solar” as an impediment to growth. Speakers underscored standardized documents, consolidated PPAs, and disciplined processes would go a long way toward making portfolios of C&I projects more palatable to the investment community.

The impending reduction in the investment tax credit (ITC) for solar, which is scheduled to decrease from 30 percent to 10 percent beginning in 2017, emerged as a common concern among the speakers. While they expect the reduction to have different impacts on each segment of the solar subsector, they asserted it will collectively require investors and developers to adjust their expectations. They further speculated tax equity investors may need to reduce their yield requirements to make the numbers work, and new financing structures may emerge, such as combining debt and tax equity into a single product.

“Post 2016, the combination of debt and tax equity into one single product will become an increasingly attractive way to deploy projects.”

Yuri Horwitz, CEO, Sol Systems

Featured Speakers: (from left to right)

Yuri Horwitz, CEO, Sol Systems

Mit Buchanan, Managing Director, Energy Investments, JPMorgan Capital Corporation

George Revock, Managing Director, Head of Alternative Energy and Project Finance, Capital One

Keith Adams, Principal, Deloitte Transactions and Business Analytics LLP (moderator)



⁵ “Short-term Energy and Winter Fuels Outlook,” Renewables and CO2 Emissions, Energy Information Administration, http://www.eia.gov/forecasts/steo/report/renew_co2.cfm, accessed October 16, 2014.

⁶ Ibid.



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Elective sessions – *Technical Topics*



Concluding Perspectives



The Impact of Self-Generation and Microgrids

Until recently, the concept of microgrids generally implied a back-up electric generation and distribution system, mainly powered by diesel engines and perhaps involving a small wind or solar component. As Brad Luyster, vice president, general manager Microgrids, North America, ABB, explained, that concept is poised to expand dramatically.

With the integration of automated dispatch capabilities, flywheel storage mechanisms, and other grid-stabilizing technologies, microgrids can now incorporate intermittent renewables to a much greater extent, essentially creating a clean, highly reliable, distributed generation and distribution system. These next-gen systems, noted Mr. Luyster, presently make “huge sense” for island nations and remote communities with strong breezes, plentiful sunshine, and exorbitant electricity costs. But, what do they mean for the North American market?

Over the long term, they may have the potential to invert the traditional role of the North American electrical infrastructure. “Microgrids powered by the combination of renewables and fossil fuels create redundancies in the generation and distribution system so the ‘big grid’ can now become the back-up,” explained Mr. Luyster.

While the growth trends in the North American microgrid market are strong, Mr. Luyster asserted it will be a long time before they become pervasive. Among other barriers, he noted lagging technical standards and definitions; inconsistency among utility business models, which prohibit a “one-size-fits-all” approach; and regulatory uncertainty concerning the evolving role of utilities and the services they and their competitors are permitted to provide. These barriers, as one might expect, collectively create financing challenges.

According to Mr. Luyster, campus deployments presently dominate the North American microgrid landscape. In the short term, he anticipates the market to grow primarily among “mission-critical” electricity users, such as data centers, government facilities, military installations, and hospitals—all of which require extreme reliability and heightened quality from their electrical systems. He does, however, foresee utilities jumping into distributed generation over the long run. “They’ll eventually do it to get down closer to the customer and to help grow their revenue streams, improve their grids, and enhance their performance,” he concluded.



“There’s a huge financial piece that has to be overcome nowadays when you talk about installing distributed generation.”

Brad Luyster, Vice President, General Manager
Microgrids, North America, ABB



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Elective sessions – *Featured Topics*



Elective sessions – *Technical Topics*



Concluding Perspectives



Elective Sessions — Featured Topics

Several elective sessions were offered concurrently throughout the Seminar. Some provided insights into broad special topics while others delved into the technical aspects of accounting, tax, and finance as applied to alternative energy.

Click on a title for a description of each session

Biofuels and Renewable Chemicals — Perspectives from Leading Companies

Emerging Market Investment Opportunities

Expanding Horizons — Investing in Foreign Alternative Energy Projects

Risk Mitigation Strategies — Perspective on Dealing with Renewable Power's Revenue Uncertainty



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Elective sessions – *Technical Topics*



Concluding Perspectives



Biofuels and Renewable Chemicals — Perspectives from Leading Companies

A decade ago, the biofuels sector was cooking—or perhaps fermenting—at an unprecedented pace. Then came the financial crisis of 2008, coupled with the “food versus fuel” controversy associated with corn-based ethanol. Despite the ensuing industry shakeout, technological innovation marched on and new business models emerged. Today, the surviving companies are leading biofuels down new, cost-effective paths that do not compete with food production. Speakers explained one of these paths involves using a broad array of low-cost feedstocks to create renewable, clean diesel fuel. These feedstocks include used frying oils from fast food restaurants, soybean oil, which is a common agricultural waste product, and non-food-grade corn oil, which is a by-product of ethanol production. Speakers further maintained that feedstock flexibility and availability are critical to attaining “better, faster, and cheaper” production of biofuels. Moving ahead, they foresee expanded opportunities in blending biofuels into heating oil; generating more electricity from gases produced via anaerobic waste-digestion systems; meeting the trucking and mining industries’ growing demand for clean-burning, cost-competitive diesel fuels; and producing a greater array of renewable chemicals, since virtually any petrochemical can be replicated via bio-based refining processes.

Session Speakers:

Dan Kinsella, Partner, Deloitte & Touche LLP

David Niles, Vice President and Controller, Avant Energy, Inc.

Chad Stone, CFO, Renewable Energy Group, Inc.

Emerging Market Investment Opportunities

Approximately one out of five people in the world do not have electricity. Meanwhile, most of the world’s electricity demand growth is expected to occur in developing nations. Speakers asserted these factors point to significant investment opportunities for alternative energy providers. These opportunities range from utility-scale solar and wind installations to captive generation solutions—and everything in-between, including infrastructure rehabilitation. On the one hand, speakers explained that some emerging markets offer renewable developers the unique advantage of being able to work from a “clean slate” since they have not previously relied upon centralized, fossil-fuel generation on a large scale. On the other hand, speakers cautioned that emerging markets come with their own distinct brand of challenges. These include concerns about political stability, the presence of law, and availability of local employees. Speakers also stressed the importance of developers to understand the context of the country they are going into and that they may be interacting with people who are unfamiliar with—and inherently suspicious of—the private sector.

Session Speakers:

Liubym Gerasymenko, CFO, IPP Development, Symbion Power

Denise Kutsch, Associate Director, Overseas Private Investment Corporation

Kathleen O’Dell, Senior Manager, Deloitte Consulting LLP

Joe Oliver, Senior Manager, Deloitte Transactions and Business Analytics LLP



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Concluding Perspectives



Expanding Horizons — Investing in Foreign Alternative Energy Projects

Where in the world should renewable energy developers go next? Noting that opportunities exist around the globe, Steve Ryder, senior vice president, Finance, Invenergy, outlined some conditions to look for, as well as some to avoid, when investing in foreign alternative energy projects. In addition to having a favorable macroeconomic environment, Mr. Ryder suggested developers should also consider whether or not the country in question has a strong rule of law and the right energy fundamentals for a given project in terms of energy prices and policies. He also emphasized the importance of finding a trustworthy local development partner in order to establish local relationships, steer clear of obstacles, and make sure capital is deployed efficiently. Overall, Mr. Ryder underscored the general theme of not working alone in a foreign jurisdiction. In addition to having a local development partner, he suggested developers should also maintain key staff in the country as well as obtain legal, accounting, and tax advice from professionals who have intimate knowledge of the local environment.

Session Speakers:

Tom Keefe, Partner, Deloitte & Touche LLP

Steve Ryder, Senior Vice President, Finance, Invenergy LLC

Risk Mitigation Strategies — Perspective on Dealing with Renewable Power's Revenue Uncertainty

When it comes to risk management, the alternative energy sector has many moving parts. Companies must find ways to deal with price fluctuations (i.e., hourly prices are different from forward prices, and forward prices are different from forecasts) and supply volatility (i.e., actual generation varies from forecasts and expected loads). They also must be prepared for the unexpected, such as transmission bottlenecks and unplanned outages. All of these risks pose financial hazards, but speakers asserted a disciplined risk-mitigation framework can make it more feasible to manage them. This framework includes processes and methods for assessing risk exposure, setting objectives, designing a hedge strategy, and measuring, monitoring and responding to risks. Speakers particularly emphasized the need to have clearly defined, quantifiable, and market-compatible objectives when designing a hedge strategy. These objectives, they explained, can relate to revenue/earnings and/or options budgets. In any case, they stressed the purpose of a hedge program is not to make money or to be speculative, but instead to reduce volatility, protect financial requirements, and to mitigate losses.

Session Speakers:

Steve Engler, Director, Deloitte & Touche LLP

Jack Nirenberg, Senior Manager, Deloitte Services LP



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Concluding Perspectives



Elective Sessions — Technical Topics



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Accounting for Partnership Flip Structures and Leases



Beginning of Construction Rules for PTC (and ITC in Lieu of PTC)



Controversy — Cash Grant Disputes and Related Disagreements



Hypothetical Liquidation at Book Value (HLBV) — Case Study



Introduction to Tax Equity Structures — Part I



Introduction to Tax Equity Structures — Part II



Investment Tax Credits and Grants — Eligible Costs and Basis



Involuntary Conversions and Casualty Losses



M&A Accounting and Tax Considerations



Modeling Concepts — Partnership Flip and Sale-Leaseback Structures



Partnership Flip Structuring — Tax Perspectives



Revenue Procedure 2014-12 — The Historic Boardwalk Safe Harbor



Standard Setting Updates and Accounting Hot Topics



Structuring Lease Investments — Tax Perspective



Sub K Tax Issues — Technical Terminations, “Regulatory” Allocations, § 704(c) Property, and § 754 Elections



Using Hedge Accounting to Better Reflect Risk Mitigation Strategies



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Elective sessions — *Featured Topics*



Elective sessions — *Technical Topics*



Concluding Perspectives



Concluding Perspectives

The future of alternative energy is expanding. While solar and wind installations continue to grow at a robust pace, an ever-broadening slate of alternative energy technologies, encompassing waste-to-energy, biofuels, microgrids, and more, are also finding growing markets. Continuous improvements in technology, operational processes, and financing techniques are improving efficiencies and enhancing value propositions throughout the sector—and importantly, this progress is seeping into mainstream awareness. The [Deloitte reSources 2014 Study](#) shows increasing interest in alternative energy by consumers and businesses in the United States. For instance, 75 percent of consumers say they consider themselves knowledgeable about alternative energy resources, and 44 percent of businesses say they now generate some portion of their electricity on-site. While challenges still remain, the sector is paving the way for growth not only by advancing its technologies and processes, but also by promoting the benefits of renewables and energy management.



“There’s no doubt 2013 was a year of opportunities and records and 2014 is shaping up to be very similar: It’s exciting to ponder what’s next.”

Marlene Motyka, US Alternative Energy Leader,
Principal, Deloitte Transactions and Business Analytics LLP



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Concluding Perspectives

