

Mintz Levin Energy Technology

Energy Technology Connections Newsletter

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JANUARY 2016

A Note from the Editors

Our January edition of *Energy Technology Connections* brings you recent industry highlights, the latest news from Capitol Hill, and a list of upcoming energy industry events. In Leaders in the News, we profile our friends at Northeast Clean Energy Council (NECEC) and highlight their recent trip to the United Nations Climate Change Conference (COP21) in Paris. We also congratulate the Los Angeles Cleantech Incubator for being ranked the #3 incubator in the world. Our Innovator Profile explores Qorax Energy's work providing access to energy resources in fragile states. For event highlights, we note the NECEC panel discussion and member mixer entitled "Clean Energy After COP21" to be held in February, as well as Citi's Sustainability Forum in March. Lastly, a special edition of our Washington Update highlights Congress's start to the year and provides an overview of what to expect from the legislative, executive, and judicial branches in 2016 regarding the energy technology industry. It's going to be an important year for energy tech — we're excited to have you along for the ride!

For links to industry grant opportunities and stories from the business, policy, and research sectors of the energy and clean technology industry, please see our Energy Navigator.

You can subscribe to our Energy Tech Matters blog here.

Leaders in the News: NECEC and Los Angeles Cleantech Incubator

This month we are featuring NECEC, which led a US delegation of Northeast clean energy company executives to last month's 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21) in Paris. NECEC attended the La Galerie exhibition that showcased the existing and emerging solutions to combat climate change. NECEC President Peter Rothstein also participated in a panel discussion entitled "Clean Energy through Policy, Technology and Finance" on December 5 and an "Energy Innovation and the US Northeast Clean Energy Grid" workshop on December 8.

NECEC was eager to highlight the Northeast region's successful implementation of climate, renewable, efficiency, innovation and financing policies and programs over the last decade, including cutting power sector CO2 pollution more than 40% since 2005 while growing the region's economy more than 8% over that same period. Rothstein noted, "By showcasing the success stories of the Northeast's clean energy businesses, NECEC looks forward to elevating the story of how the region has made significant progress to develop and deploy innovative solutions to address climate change while also creating a strong, growing clean energy economy."

Established in late 2006, NECEC has developed into the Northeast's leading clean energy business organization and works with businesses, entrepreneurs, policymakers and other key stakeholders to drive the clean energy industry forward. NECEC consists of the Northeast Clean Energy Council, a key player in influencing the energy policy agenda and growing the clean energy economy, and NECEC Institute, which leads programs to develop the region's clean energy economy by supporting innovation and entrepreneurship, industry research and development, and workforce development. Previously designated the New England Clean Energy Council, the



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organization changed its name to the Northeast Clean Energy Council in October 2015, signifying its growing activity in the state of New York.

COP21 concluded with the approval of a landmark climate accord that is seeking to combat climate change on a global level. To view the full Paris Agreement, click here. Mintz Levin thanks NECEC for sharing the Northeast's clean energy successes, and we look forward to observing the solutions that NECEC develops in the region.

The Mintz Levin team would also like to congratulate our friends at the Los Angeles Cleantech Incubator (LACI) for being ranked #3 on UBI Global's list of World Top University Associated Business Incubators for 2015. Improving upon last year's recognition as the #6 Incubator globally, LACI was also recognized as one of two High Impact Incubators in North America and is notably the only cleantech incubator ranked in the UBI Index.

LACI was formed in October 2011 to accelerate clean energy innovation in the Los Angeles region. By partnering with local public, private, and educational organizations, LACI aims to advance cleantech start-ups by equipping entrepreneurs with access to programming, office space, CEO coaching and mentoring, and a growing network of experts and capital. As of November 2015, LACI had helped 40 companies raise over \$60 million in investment capital and create more than 700 jobs. We look forward to seeing LACI drive cleantech development in Los Angeles!

Innovator Profile: Qorax Energy

This month's Innovator Profile highlights Qorax Energy (pronounced "ko-rah"), a company dedicated to providing people living in fragile states affordable, long-term access to cleaner, more robust energy services.

The half billion people who currently live in fragile states suffer acute problems stemming from a lack of access to affordable energy. While the technology to solve the problem exists, the so-called off-grid "African" solar revolution has been confined to just a handful of countries: Kenya, Tanzania, Uganda, and Rwanda, leaving everyone else in the dark.

Today, nearly half of fragile states (21 out of 47) are classified as middle-income. Electricity is a baseline demand for households that people are always willing to pay for and this demand will only increase with time. Yet the majority of people in these markets, often 70% or more, have never had access to grid power. Typically, they spend 25-30% of their income every year, 10 times more than we do in the United States, to charge their phones and light their homes with expensive, harmful alternatives like kerosene. But a lantern cannot charge a phone and it creates enormous health risks. Air pollution now kills more people each year than HIV/ADIS, malaria and tuberculosis combined. At the same time, most of the local household purchasing power lies abroad in the form of diaspora remittances, which now account for more capital inflow to fragile states than aid budgets and foreign investment — over \$85 billion each year.

Solutions to these economic, environmental, and health problems are difficult to come by, as many companies that could help deem these fragile, kerosene-reliant regions too risky, remote, and unprofitable. International firms have tried a cut-and-paste approach that does not match the unique logistics, payment, and credit-screening challenges present. Small local businesses lack access to working capital, supply chains, and risk management tools keeping their size and outreach minimal. At the same time, the IMF and other members of the development community have acknowledged that too much aid is detrimental to transitioning out of fragility.

Qorax, however, has not shied away from such difficult problem solving. The company unlocks vital clean energy access in fragile states and other frontier markets by establishing solar distribution companies as joint ventures with local partners. Qorax then enhances their capabilities through its platform, which includes access to growth capital, new revenue streams, and aggregated support across multiple key operational domains like product selection, SCM, CRM, and branding. A special feature is a remittance network partnership that allows diaspora living abroad to fund new solar systems for their families.

Qorax raised initial funding from a group of venture philanthropy organizations including National Geographic, Shell, Echoing Green, and The MasterCard Foundation. The company has deployed these funds in two pilot partnerships in Somalia and the DR Congo, respectively. Moving forward, it is expanding operations in Somalia and is under MOU for an entity in Ethiopia that will leverage the platform of one of the country's first two mobile money service providers.

Running through each of Qorax's projects is a common thread: an aim to create an economic network and knowledge flow between the projects that will help its partners forge a cleaner, sustainable future.

Congratulations to Qorax for its innovation thus far — the Mintz Levin team looks forward to what new projects are to come in the future!

Event Highlights

The new year is already filling up with new conferences focused on energy. If you are interested in upcoming events in the industry, be sure to check out our blog! *Energy Technology Matters* features a frequently updated events page dedicated to listing happenings around the globe. Click here to view it — and feel free to add this page to your favorites list! Are you hosting an energy event that you'd like us to include? Please reach out to Cassie Bent at CMBent@mintz.com.

As we mentioned in the Leaders in the News section above, members of NECEC arrived back from COP21 with insights to share. Are you a member of NECEC? If so, we hope to see you next month at their panel discussion and member mixer: Clean Energy After COP21. This event will take place in Boston on February 10. For more information, click here.

Another event to keep on your radar is Citi's Sustainability Forum: Sustainable Investments in 2016 and Beyond. This forum will take place in New York on March 2, and our own Tom Burton will be in attendance. For more information, click here.

Washington Update

January began with Congress in recess following the approval of a \$1.1 trillion omnibus appropriations and \$680 billion tax extenders package. The House returned to work January 5th for the second session of the 114th Congress, truncated by the presidential election, and the Senate returned January 11. In the midst of an election year, Congress faces a fairly full schedule for 2016. Included in that list, of course, will be renewed debates over tax issues, including hearings and markups that address extenders that, through a drafting error, were neither made permanent nor expanded in the approved package, like tax credits for non-solar technologies such as qualified fuel cells, microturbines, combined heat and power facilities, thermal energy properties, and more.

Government agencies, meanwhile, are primed for an impactful new year, as the recently-passed spending bill provides \$29.7 billion to the Department of Energy, including \$2.1 billion for the Office of Energy Efficiency and Renewable Energy, \$986 million for nuclear energy programs, and \$632 million for fossil fuel research and development; \$8.14 billion to the Environmental Protection Agency for the 2016 fiscal year, an identical figure to its 2015 funding level; \$990 million to the Nuclear Regulatory Commission, a small decrease from the \$1.03 billion requested; and \$319.8 million to the Federal Energy Regulatory Commission, meeting the administration's request.

With the three-year reauthorization of the Land and Water Conservation Fund causing Senators Richard Burr (R-NC) and Kelly Ayotte (R-NH) to lift their holds on the bipartisan compromise Toxic Substances Control Act reform legislation, the Senate approved the measure (H.R. 2576) with a substitute amendment from Senator James Inhofe December 17. The Senate and House will conference their bills shortly, with the hope of finalizing TSCA reform in early 2016.

Senate Energy and Natural Resources Committee Chair Lisa Murkowski (R-AK), who is up for reelection, is hoping to secure floor time as soon as possible for the bipartisan energy package (S. 2012) that cleared the

committee last summer. Among other things, the measure includes language to increase energy efficiency, renewable energy, and energy infrastructure, as well as impose deadlines on the Department of Energy to make final decisions on natural gas exports, and permanently reauthorize the Land and Water Conservation Fund. Senate Democrats unveiled an alternative package focused on clean energy last fall that could preview some of the amendments likely to surface during floor debate. There is no guarantee that a bill will move in 2016, though there may be a scaled back package, most likely before late fall.

Additional topics among the list of potential issues for consideration this coming year include efforts to reform the national biofuels mandate, better protecting the power grid against cyber-attacks, and overseeing Environmental Protection Agency and other Administration energy and environment related regulations during President Obama's final year in office.

While the fate of much of this Administration's energy and environment agenda awaits rulings in the judicial branch this year, President Obama will finalize several additional energy and environment regulations during his final year in office, from efficiency rules at the Department of Energy, to pipeline safety at the Department of Transportation, to medium- and heavy-duty vehicle fuel efficiency at the Environmental Protection Agency, to a Department of Interior plan that could allow limited oil and gas development off the coasts of Georgia, North Carolina, South Carolina, and Virginia. Additionally, President Obama highlighted climate change as one of four pillars of action in his final State of the Union address to Congress last week.

The Environmental Protection Agency will continue its theme for the past seven years, facing lawsuits and criticism from both sides of the political aisle on almost everything the agency does. If 2015 was the year the Obama Administration pushed its environmental agenda forward, 2016 could be the year to preserve it.

Until and unless the US Court of Appeals for the District of Columbia Circuit stays the Clean Power Plan court challenges from 27 states and a number of industry groups, federal and state regulators must begin working to implement the rule, with implementation plans due starting in 2018 and emissions reductions beginning by 2022. In addition to defending the rule in court, the agency is likely to spend much of the year working with states to craft acceptable implementation plans as well as develop its own federal implementation plan. Lawsuits are expected to extend well past this year. Additionally, legal battles over the New Source Performance Standards for new and modified power plants will continue throughout the year.

Immediately following the Obama Administration's finalization of the Ozone Rule last year, an intense legal battle began, with industry groups as well as public health and environmental organizations displeased with the new 70 parts per billion standard. We expect the legal battle to continue through 2016 as well.

The Environmental Protection Agency published its Renewable Fuel Standard volume mandates for 2014-2016 in the Federal Register December 14, kicking off litigation from the oil and refining industries, biofuel producers, and corn growers, all challenging parts of the rule and defending others. Lawsuits can be filed through February 12. Additionally, the agency also plans to release a final version of its report on fracking and drinking water this year, and will consider critical comments released the first week of January by the Science Advisory Board at its shapes the final project.

In other 2016 priorities, the agency plans to finalize, in conjunction with updated average fuel economy standards from the National Highway Traffic Safety Administration, new fuel efficiency standards for medium-and heavy-duty vehicles; finalize efforts to reduce the production and use of hydrofluorocarbons; and work with countries around the world to implement the Paris climate accord by providing global technical leadership in measuring and reporting their greenhouse gas emissions.

The Department of Energy finalized more than a dozen energy efficiency standards last year, rounding out the year with standards for ceiling fans and ceiling fan light kits, rooftop air conditioners, commercial and industrial pumps, beverage vending machines, residential boilers, pre-rinse spray valves used in restaurants, and walk-in coolers and freezers. Following the most recent rules, the administration is about seventy five percent of the way toward its goal of reducing 3 billion tons CO2 emissions through final efficiency rules during the Obama Administration. We anticipate 2016 to see a similar flurry of activity on efficiency standards from the agency.

The agency also plans to complete the second Quadrennial Energy Review by late 2016. The second review will

address the United States' electricity from generation to end use. Stakeholders will start meeting early this year, with an interagency review expected by late summer; 13 teams will consider electricity sector topics, including markets, finance, and grid operations.

The Department of Interior's Bureau of Ocean Energy Management is likely to move forward in January or February with its five-year offshore drilling lease plan, setting a schedule for lease sales of offshore oil and natural gas drilling rights. The 2017-2022 plan, the first draft of which was released in early 2015, will be finalized later in the year. The most recent version of the plan includes proposals to allow offshore drilling in the Atlantic Ocean for the first time as well as sell more drilling rights in the Arctic Ocean north of Alaska.

The Fish and Wildlife Service plans to finalize several Endangered Species Act reforms, including rules for how to designate and protect critical habitat and how to make the law less burdensome to land users. The Service, along with the National Park Service, will also pursue their own oil and gas drilling reforms to ensure that sensitive landscapes are protected from spills.

The Interior Department is also likely to address the Endangered Species Act sage grouse listing as it faces a 2016 challenge of implementing land-use plans preserving sagebrush habitat across Western lands while maintaining access for oil and gas developers, miners, and ranchers. The Bureau of Land Management is also likely to address renewable energy development on public lands in a significant way. As part of his legacy, President Obama is also considering millions of acres of Western lands for permanent protection under the Antiquities Act, which allows presidents the power to withdraw federal lands from oil, gas, and mining development, among other uses.

December 14 marked the Supreme Court's last opinion day for 2015 and the justices have yet to resolve the future of the Federal Energy Regulatory Commission's demand response rule, Order No. 745. Additionally, the Federal Energy Regulatory Commission is expected to finalize a connected entities rule this year to detect and reduce energy market manipulation.

The Nuclear Regulatory Commission will issue a report in March as part of its Project Aim 2020 program to outline how to re-baseline the agency's mission and priorities and reduce staff. The commission is expected to receive the first design certification for a small modular reactor from NuScale Power by the end of the year. The commission will use remaining funds appropriated for the Yucca Mountain project to issue a final supplemental environmental statement early this year. In the meantime, the Department of Energy is seeking public comment on the siting process for storing commercial and defense generated nuclear waste.

Energy Navigator

Please visit and bookmark our Energy Navigator to easily view all of the latest headlines from the most trusted publications reporting on developments in the energy and clean technology industries. It is housed on our blog, *Energy Technology Matters*.

Upcoming Events

NEWEA 2016 Annual Conference
January 24-27, 2016
Boston, MA
More Info »

Cleantech Forum San Francisco
January 25-26, 2016
San Francisco, CA
More Info »

GLOBALCON 2016

March 9-10, 2016 Boston, MA More Info »

U.S./Canada Cross-Border Power Summit March 14-15, 2016 Boston, MA

More Info »

9th Annual Storage Week

January 25-27, 2016 San Diego, CA

More Info »

Investor Summit on Climate Risk 2016

January 27, 2016 New York, NY More Info »

Solar Summit: Mexico

January 27-28, 2016 Mexico City, Mexico

More Info »

SEBANE's The State of Solar: Challenges and Opportunities in 2016

January 28, 2016 Boston, MA More Info »

Maine Clean Energy Day

February 3, 2016 Hallowell, ME More Info »

Wind Power Finance & Investment Summit 2016

February 9-11, 2016 San Diego, CA

More Info »

Clean Energy After COP1: A NECEC Panel Discussion & Member Mixer

February 10, 2016 Boston, MA

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#NationWISE New York

February 23, 2016 New York, NY More Info »

Solar Power PV Conference and Expo

February 24-25, 2016 Boston, MA

More Info »

Raab Associates' 149th New England Electricity Restructuring Roundtable

February 26, 2016 Boston, MA More Info »

6th Defense Renewables Summit

March 15-16, 2016 Arlington, VA More Info »

3rd EPA Clean Power Plan Implementation Summit

March 15-17, 2016 Houston, TX More Info »

2016 ACORE National Renewable Policy Forum

March 16-17, 2016 Washington, DC

More Info »

California's Distributed Energy Future 2016

March 16-17, 2016 San Francisco, CA

More Info »

More Info »

Microgrid Markets Summit East

March 16-18, 2016 Arlington, VA

Solar Power Finance & Investment 2016

March 22-24, 2016 San Diego, CA More Info »

19th Annual Transmission Summit

March 29-31, 2016 Washington, DC

More Info »

More Info »

Mexico Energy Finance & Investment Summit

March 29-31, 2016 New York, NY

EnergySMART 2016

April 4-6, 2016 Washington, DC

More Info »

BNEF The Future of Energy Summit (Global)

April 4-5, 2016 New York, NY

More Info »

ARPA-E Summit

February 29 – March 2, 2016 Washington, DC

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More Info »

Citi's Sustainable Investments in 2016 and Beyond

March 2, 2016 New York, NY

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NECA 2016 Renewable Energy Conference

March 3, 2016 Newton, MA

More Info »

MIT Energy Conference

March 4-5, 2016

TBD

More Info »

Tufts Energy Conference

March 6, 2016 Medford, MA More Info »

BuildingEnergy 2016

March 8-10, 2016 Boston, MA

More Info »

Impact Capitalism Summit: Chicago

April 26-27, 2016 Chicago, IL More Info »

GTM's Solar Summit 2016

May 11-12, 2016 Scottsdale, AZ

More Info »

TechConnect World Innovation Conference & Expo

May 22-25, 2016 Washington, DC

More Info »

AWEA WINDPOWER 2016

May 23-26, 2016 New Orleans, LA

More Info »

GTM's Grid Edge World Forum 2016

June 21-23, 2016 San Jose, CA

More Info »

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