

Energy Technology Connections Newsletter: Your Law Firm Link to Industry News

JANUARY 2015

In the January edition of *Energy Technology Connections*, we bring you recent industry highlights, the latest news from Capitol Hill, and a list of upcoming energy industry events. In our Leaders in the News section, we congratulate Deckard Sorensen, president and co-founder of NBD Nanotechnologies, on being honored in *Forbes*'s "30 Under 30" list for Energy, and we highlight the newly opened Energy Innovation Center at the Mid-West Energy Research Consortium in Milwaukee, Wisconsin. In Event Highlights, we provide information about the NECEC's upcoming CO2: From Waste to Worth event in Providence, Rhode Island; the ARPA-E Energy Innovation Summit in Washington, DC; and the Fifth Annual EnergySMART Conference in Philadelphia, Pennsylvania. In addition, we highlight the recent efforts of two Boston-based energy start-ups, DropWise and Anfiro, in our Innovator Profile. Finally, our Washington Update provides recent information on energy-related legislative and regulatory activity in the nation's capital. 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](#).

Leaders in the News

We are thrilled to congratulate our client and friend Deckard Sorensen, president and co-founder of [NBD Nanotechnologies](#), on being [named](#) to *Forbes*'s "30 Under 30" list for Energy in 2015. Drawing inspiration from the Namib Desert beetle while studying at Boston College, Deckard and co-founder Miguel Galvez launched NBD Nano to create unique and customized materials that manage and control the interaction of water with a wide variety of surfaces. So far, NBD Nano has raised over \$6.5 million in funding to develop these technologies. Deckard is more than deserving of this honor, and we're delighted that the hard work he has put into NBD Nano has drawn recognition from *Forbes*. We're sure there is more great news to come from this team!

We would also like to extend our best wishes to the newly opened [Energy Innovation Center \(EIC\)](#) at the [Mid-West Energy Research Consortium \(M-WERC\)](#). The EIC, located at M-WERC offices in Milwaukee, will serve as an incubator for nascent energy, power, and control start-ups and will provide office space, offer legal, accounting, and mentoring services, and connect start-ups with knowledgeable industry partners. The center is now accepting applications from start-ups to fill nine initial start-up spots, a number that the EIC hopes to expand to 30 or higher in the near future. Veteran entrepreneurs Greg Meier and Nick Wichert, each with lengthy resumes of success in the Milwaukee start-up/accelerator sphere, have been tapped to lead the new incubator.

The EIC will concentrate on developing products for energy efficiency and advanced manufacturing, with an emphasis on hardware development. With access to M-WERC's roadmapping methodology, key power industry and academic partners, and state-of-the-art testing and prototyping facilities, start-ups will be able to successfully incubate, demonstrate, and commercialize clean energy technology. We can't wait to see the outstanding ideas, technologies, and companies that emerge from the EIC, and we wish all its young companies the best of luck!

Event Highlights

From February 9 to 11, the US Department of Energy will host the fifth annual [ARPA-E Energy Innovation Summit](#), just outside Washington, DC, at the Gaylord Convention Center. As in years past, the Energy Innovation Summit will bring together the very best minds in business, academia, and government around the cutting-edge technologies that could be game-changers for energy generation, use, and storage.

Attendees will see an [agenda](#) packed with amazing technology demonstrations, exceptional speakers and panelists, and can't-miss networking opportunities with influential business, government, and military leaders. Those in attendance will see the [Summit Technology Showcase](#), which includes over 250 carefully prescreened, innovative energy technologies, and hear from

a star-studded cast of speakers, including the likes of Ellen Williams, Ernest Moniz, Doyle Beneby, Ahmad Chatila, and Janet Napolitano. In addition, the Summit will watch as six to eight specially selected energy start-ups participate in the [Future Energy Pitching Session](#) and receive advice from a panel of venture capital and investment veterans. [Discounted registration](#) prices are available until January 8 for all attendees, so act quickly to register and ensure your discount.

Additionally, we'd like to highlight an important event coming up on January 15 in Providence, [CO2: From Waste to Worth – Exploring the Market for CO2-based Commodities](#). Hosted by the [New England Clean Energy Center \(NECEC\)](#) in conjunction with Brown University and the Slater Technology Fund, this event will convene some of the leading minds in clean energy to exchange ideas and learn about carbon capture and utilization technologies coming from labs and academic research centers in New England. With topics like carbon conversion, productive reuse, and other transformation technologies on the table, the event is sure to be useful for innovators, investors, and carbon-emitting customers alike. This wonderful event is free and open to the public, so mark your calendar and make sure to [register](#) in advance! We hope to see you there.

Finally, we want to give a shout-out to the [Fifth Annual EnergySMART Conference](#), being held this year in Philadelphia from March 24 to 26. This year's event will offer conference-goers an unparalleled look at ground-breaking technology developments, financing options, and thought leadership in the fields of energy intelligence, management, and operational efficiency. The [star-studded cast](#) of keynote speakers and presenters includes many of our friends and colleagues, including Omar Saadeh of [Greentech Media](#) and Micah Remley, Chad Gillless, Ryan Esch, John duPont, and Gregg Dixon of [EnerNOC](#). The conference organizers are offering an early-bird registration rate for those who [register](#) before the end of January, so don't miss out on your chance to be a part of this wonderful event!

Innovator Profile

For this month's Innovator Profile, we highlight the recent achievements of two Boston-based energy start-ups that are making waves in energy and efficiency circles. These companies are [DropWise](#), a start-up developing nano-engineered coating technologies for power plants and other applications, and [Anfiro](#), a start-up working on high-permeability reverse-osmosis membranes for water purification. The two companies, both of which have emerged from research and laboratories at MIT, were \$50K Gold Winners at this year's [MassChallenge accelerator program](#), which was held in late October. Each is a shining example of the exciting, cutting-edge energy work that we are seeing more and more of in the Boston area, and we're excited to profile their stories here.

DropWise has caught the energy community's attention with its unique coating technology, which offers increased efficiency and lowered emissions from coal, natural gas, biomass, solar thermal, nuclear, geothermal, and other steam-driven power plants. Using a nano-engineered vapor technique developed at the Gleason Lab at MIT, DropWise is able to graft an ultra-thin polymer film to all sorts of metal surfaces, including, in particular, the heat-exchangers used by power plants. Whatever the configuration of the exchanger or the condensing vapor being used, DropWise's technology has demonstrated an ability to achieve significant efficiency increases in every instance. From its offices in South Boston, DropWise is looking to continue advancing this technology and expand its efforts into desalination, HVAC/R, and chemical refinery spaces.

Anfiro has also garnered significant attention in Boston energy and water circles in recent months, thanks to its remarkable reverse-osmosis membrane technology. The young company expects that its product will have wide application across energy sectors, but it is focusing the majority of its efforts on water purification and the production of clean, affordable drinking water. With ultra-high permeability membranes, Anfiro has decreased the pressure needed for water passage and, in doing so, has significantly reduced the cost associated with membranous purification. Though Anfiro is still in the process of finalizing a prototype, Anfiro's CEO Jaime Mateus has stated that the overall price of its membranes will be significantly lower than existing products, which typically cost anywhere from \$400 to \$1,200 dollars. Long-term, Anfiro is looking to expand its membrane technology toward applications in oil and gas, mining, pharmaceuticals, microelectronics, and power generation.

The future seems quite bright for these two emerging energy-tech companies, and we very much look forward to watching their journeys progress.

Washington Update

The 113th Congress adjourned for good in mid-December, and efforts are underway to prepare for an eventful 114th Congress and final two years of the Obama administration. Before the Senate departed, they finalized the one-year tax extenders package ([H.R. 5771](#)), which the House had previously approved, and completed a series of nominations. Among other things, the tax extenders package extended the wind energy production tax credit through the end of December. The short extension sets the stage for a broader debate on tax reform in 2015, and parties on both sides of the aisle are gearing up for a fight over the PTC, among many other provisions. President Obama signed the \$41.6 billion short-term extenders bill into law December 19. The same day, he announced that he will release a detailed plan in the near future to overhaul the tax code. Congressional Republicans have urged the Obama administration to add more details to a 2012 framework for business tax changes.

Senate Democratic energy and environment committee assignments, announced in mid-December, are as follows:

Energy and Natural Resources:

- Ranking member: Senator Maria Cantwell (WA)
- New members: Mazie Hirono (HI), Angus King (ME), Elizabeth Warren (MA)
- Returning members: Ron Wyden (OR), Bernie Sanders (VT), Debbie Stabenow (MI), Al Franken (MN), Joe Manchin (WV), Martin Heinrich (NM)
- Departing members still in the Senate: Brian Schatz (HI), Tammy Baldwin (WI)
- Members leaving the Senate: Mary Landrieu (LA), Tim Johnson (SD), Mark Udall (CO)

Environment and Public Works:

- Ranking member: Barbara Boxer (CA)
- Returning members: Tom Carper (DE), Ben Cardin (MD), Bernie Sanders (VT), Sheldon Whitehouse (RI), Jeff Merkley (OR), Kirsten Gillibrand (NY), Ed Markey (MA)
- Departing members still in the Senate: Tom Udall (NM), Cory Booker (NJ)

On December 15, Senate Republicans named four new members, all moving from the House, to the Energy and Natural Resources Committee: Senators-elect Cory Gardner (R-CO), Steve Daines (R-MT), Bill Cassidy (R-LA), and Shelley Moore Capito (R-WV). Senator Lisa Murkowski (R-AK) will become committee chair. Senators Dean Heller (R-NV) and Tim Scott (R-SC) will leave the committee.

On December 15, Senate Republicans named three new members to the Environment and Public Works Committee: Senators-elect Shelley Moore Capito (R-WV), Mike Rounds (R-SD), and Dan Sullivan (R-AK), and Senator James Inhofe (R-OK) will assume the committee chairmanship.

On the House side, Representative Adam Kinzinger (R-IL) will replace Senator-elect Cory Gardner (R-LA) as the chair of the House Energy Savings Performance Caucus. Senator-elect Gardner co-founded the caucus with Representative Peter Welch (D-VT) in 2012. Representative Chris Van Hollen (D-MD) will become a co-chairman of the Bicameral Task Force on Climate Change with Senator Sheldon Whitehouse (D-RI), following Representative Henry Waxman's (D-CA) retirement.

On December 16, the Senate approved Colette Honorable for a spot on the Federal Energy Regulatory Commission, Christopher Smith to serve as assistant energy secretary for fossil energy, Estevan Lopez as commissioner of the Interior Department's Bureau of Reclamation, John Cruden to head the Justice Department's Environment and Natural Resources Division, and Richard Engler and Manuel Ehrlic for seats on the Chemical Safety Board. The Senate did not act upon three Department of Energy nominees, and President Obama will have to re-nominate them in 2015: Marc Kastner for director of the Office of Science, Jonathan Elkind for assistant secretary of international affairs, and Monica Regalbuto for assistant secretary for environmental management.

Senators Jeanne Shaheen (D-NH) and Rob Portman (R-OH) attempted to move a pared-down version of their energy efficiency bill in mid-December; the legislation contained provisions the House had approved by a wide margin earlier in the year ([H.R. 2126](#)). Senators Tom Coburn (R-OK) and Pat Toomey (R-PA) blocked the measure, but Senator Lisa Murkowski (R-AK) recommitted on December 16 to working with her colleagues to move an energy efficiency package in the 114th Congress. Senators Shaheen and Portman plan to reintroduce their broader efficiency bill later this month. Congress returned for the 114th session on January 6.

Internationally, the United Nations Framework Convention on Climate Change celebrated its 20th anniversary in December, with international climate negotiations in [Lima, Peru](#) from December 1 through 12. The Lima talks mark the 20th Conference of Parties to the UNFCCC and the 10th Meeting of Parties to the Kyoto Protocol. After two weeks of talks, and more than 36 hours after the talks were scheduled to end, climate negotiators reached a modest agreement for reducing greenhouse gas emissions that will be finalized this December in Paris. Under the [Lima Call for Climate Action](#), 196 countries pledged to craft nation-specific plans to reduce greenhouse gas emissions by early 2015, but participants delayed decisions on other significant and divisive measures, including the Intended Nationally Determined Contributions. Negotiators agreed also to a separate [draft](#) negotiating text that will form the basis for the Paris discussions later this year.

United Nations Secretary General Ban Ki-moon called on December 9 for transformative climate talks, and the Green Climate Fund passed its \$10 billion threshold for the year after receiving a \$60 million pledge from Belgium. United States Secretary of

State John Kerry led the US delegation in the final days of the talks beginning December 10. Environmental groups continue to push negotiators to retain language pledging more than 190 nations to a goal of keeping global temperatures from rising more than two degrees Celsius, as outlined in the 2009 Copenhagen Accord.

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

Corporate Energy Sourcing

January 12 – 14, 2015
San Diego, CA

[More Info »](#)

CO2: From Waste to Worth — Exploring the Market for CO2-Based Commodities

January 15, 2015
Providence, RI

[More Info »](#)

The State of Solar Energy / Voltaics

January 20, 2015
Hopkinton, MA

[More Info »](#)

Order 745 and the Future of Demand Response: An Interview with Former FERC Chairman Jon Wellinghoff

January 21, 2015
Webinar

[More Info »](#)

New England Water Environment Association 2015 Annual Conference & Exhibit

January 25 – 28, 2015
Boston, MA

[More Info »](#)

Water Management for the Permian Basin

January 27 – 28, 2015
Houston, TX

[More Info »](#)

Wind Power Finance & Investment Summit & Exhibit

February 3 – 5, 2015
San Diego, CA

[More Info »](#)

ARPA-E Energy Innovation Summit

February 9 – 11, 2015
Washington, DC

[More Info »](#)

GreenBiz 2015

February 17 – 19, 2015
Phoenix, AZ

[More Info »](#)

MIT Energy Conference

February 27 – 28, 2015
Cambridge, MA

[More Info »](#)

Waste to Biogas & Clean Fuels Finance & Investment Summit

March 3 – 4, 2015
Santa Clara, CA

[More Info »](#)

BuildingEnergy 15

March 3 – 5, 2015
Boston, MA

[More Info »](#)

PV America 2015

March 9 – 10, 2015
Boston, MA

[More Info »](#)

Solar Power Finance & Investment 2015

March 23 – 26, 2015
San Diego, Ca

[More Info »](#)

Fifth Annual EnergySMART Conference

March 24 – 26, 2015
Philadelphia, PA

[More Info »](#)

Solar Summit 2015

April 14 – 16, 2015
Phoenix, AZ

[More Info »](#)

Grid Edge Live 2015

June 23 – 25, 2015
San Diego, CA

[More Info »](#)

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4544-0115-NAT-ECT