

Mississippi Renewable Energy and Energy Efficiency Update

MPSC Regular Meeting and Docket Call – November 7

At the November 7, 2017, MPSC Regular Meeting ([see agenda](#)), the Commission acted on the following items of interest to clean energy stakeholders:

Lee Solar, LLC: Docket No. 2017-UA-175: Silicon Ranch Solar has filed an [application](#) for a Certificate to Construct and Operate a Solar Electric Generating Facility in Lee County, Mississippi. The project, called Lee Solar, will be a 1.0 MW solar farm valued at \$2 million. The entire electricity output will be sold to the Tennessee Valley Authority under a power purchase agreement with a term of twenty (20) years. The solar array will cover approximately 8 acres of land, and is expected to produce enough electricity to power approximately 125 homes. The solar farm will interconnect to the grid owned by Tombigbee Electric Power Association.

MS Power Co.: Docket Nos. 2017-UA-[155](#) and [156](#): MS Power is proposing the construction of substations, transformers, several miles of 115kv transmission line and new feeder lines to support the new PG Technologies, LLC manufacturing facility in Ellisville, MS. The new electric infrastructure will cost nearly \$32 million.

CenterPoint Energy: Docket No. 2017-UA-47: CenterPoint is [proposing to construct](#) natural gas lines to offer new service to customers Lafayette County.

No action was taken in regards to the Commission's [request for comments](#) regarding the proposal to amend the Rules for Energy Efficiency Programs under **Docket No. 2010-AD-2**.

Entergy Mississippi filed a [notice of intent to raise rates](#) through a Grid Modernization Cost Adjustment Factor (GMR-1) that could go into effect on and after the first billing cycle of January 2018. The GMR-1 is being filed to recover the costs of all distribution and transmission-related capital project costs that would be incurred by Entergy Mississippi in its implementation of economic development sites and projects. More information can be found under 2017-UN-198. Entergy MS has also filed a request to [increase its fuel recovery cost](#) in response to increasing natural gas prices. **The request could add \$10 to an average customer's utility bill.**

Also, this month Mississippi Power Company filed a [request](#) for an 8.5% rate increase. The increase requests include 4% in its performance evaluation plan base-rate-review filing and 4.5% in its fuel-cost-adjustment filing. The MPSC will soon be consider the request. **Mississippi Power Co.'s request could boost monthly rates for an average residential customer by about \$11.45 per month.** Information can be found under Docket No. 2017-UN-213.

Next Meeting of the MPSC – The next [regular meeting](#) of the MPSC will take place on **December 5, 2017, at 10 am** in the MPSC Hearing Room to consider the Docket.

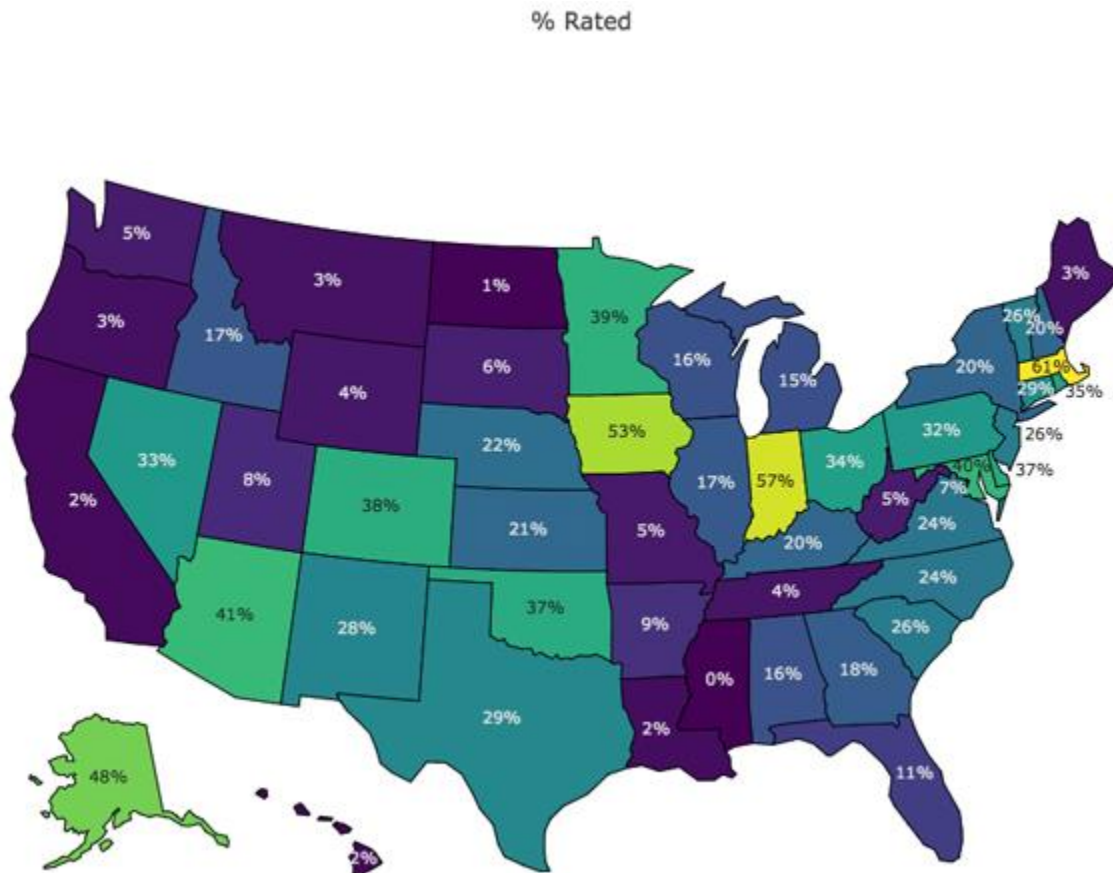
Net Metering Joint Working Group Meeting – November 21

The Net Metering Joint Working Group [met](#) to review issues associated with solar system installer certification, consumer protection and safety standards, and consumer education and outreach. The MS State Board of Contactors (MSBOC) representative indicated that the MSBOC is moving forward with the creation of a stand-alone contractor license to install solar and other distributed generation for

residential and commercial customers. MSBOC will work with educational contractor to create the test applicants will be required to pass to obtain the contractor license. The MSBOC will meet in January to determine next steps. Meeting participants also discussed steps utilities are taking to promote net metering and educate its customers on potential savings and application procedures. No consumer complaints were identified by stakeholders. A central information resource (listing) of qualified, licensed installers was identified as a need. The MSBOC has a list of all licensed contractors and use the key word search “solar” at <http://www.msbo.us/ConsolidatedSearch.cfm>.

Home Energy Rating System – Everywhere but Mississippi

The [Home Energy Rating System](#) (HERS) is a scoring and labeling program that evaluates the energy efficiency of homes. While 22% of all new homes in the U.S. in 2016 were HERS-rated, none were in Mississippi. Homeowners in Massachusetts, Indiana, and Iowa topped the nation last year in pursuit of home energy efficiency with the most homes receiving a HERS Index Score. **Mississippi was the only state in the nation not to perform a HERS assessment.** HERS Index Score provides homebuyers with a way to compare the energy performance of a home in the same fashion as miles per gallon does for auto buyers.



ASICS Footwear and Apparel Distribution Center Unveils Solar Project

On November 3, the ASICS Byhalia Distribution Center in Marshall County held a [ribbon cutting ceremony](#) to recognize the commissioning of its 1 MW rooftop solar PV system. The 3,000 solar panels will supply about 25% of the annual needs of the distribution system and is designed to generate solar energy for the facility's operations for the next 25 to 30 years. The company expects a 7-year payout on the solar panel investment. ASICS employs 250 people at the facility with total warehouse space is 855,878 square feet. The Byhalia Distribution Center was also [recognized](#) as an EPA ENERGY STAR high performance building earlier this year for energy efficiency.



Millsaps College Hosts German Consulate on Climate Change Discussion

Millsaps College is partnered with the Atlanta-based German Consulate and the Ecologic Institute US to host a one-day conference entitled "Global Climate Action: Sustainable investment in Germany and the United States" on Thursday, November 2. Conference speakers include representatives of the Federal Republic of Germany's Atlanta Consulate, Tennessee Valley Authority and Entergy Corp; senior executives from Continental, Siemens USA, and Feuer Powertrain; and representatives of Millsaps College, 2°C Mississippi and Ecologic Institute. In addition to discussions on sustainable investments and the green economy, panelists evaluated the ability of state and local business, social and governmental sectors to address climate change and implement actions to mitigate against what scientists say will be the anticipated impacts of changing climatic conditions.

EE Spotlight: CenterPoint Energy Rebates

CenterPoint Energy Mississippi [residential](#) and [small business](#) customers can receive rebates for choosing high-efficiency natural gas equipment. Customers can get rebates for water heaters, heating systems, furnace tune-ups, boiler systems and food service equipment. There are also direct install programs for available for [residential](#) and [commercial](#) natural gas customers.

Groups Continue to Review Project Failures

Since Stion announced that it would be ceasing operations and closing its Hattiesburg manufacturing facility on December 13, state officials and organizations have been tallying up the potential losses that state and local tax payers could potentially be stuck with:

Failed Economic Development Projects

	Company Name	Failure Date	State Funding (Grants/Loans)	County Funding (Grants/Loans)	Funding Source	City	County
1	MS Beef Processor	Nov-04	\$54,000,000		LWT	Oakland	Yalobusha
2	We-Gel	Mar-08	\$250,000		LWT	West Point	Clay
3	Coastal Manufacturing	Sep-08	\$150,000		Rural Impact	Wiggins	Stone
4	Steelmatic Wire, INC	Jul-11	\$150,000		Rural Impact	Sardis	Panola
5	Twin Creeks Technologies	Nov-12	\$27,700,000	\$4,000,000	MMEIA	Senatobia	Tate
6	Payliance	Sep-13	\$400,000		ACE	Oxford	Lowndes
7	KiOR Columbus, Inc.	Jan-14	\$75,000,000		IIFRF	Columbus	Lowndes
8	Hawkeye Glove Manufacturing	Nov-15	\$88,450		Rural Impact	Eupora	Webster
9	Sola Fide	Sep-16	\$250,000		Rural Impact	Brookhaven	Lincoln
10	GreenTech Automotive	Nov-16	\$3,000,000	\$2,000,000	IIFRF	Robinsonville	Tunica
11	Schulz	Jan-17	\$300,000		Rural Impact	Tunica	Tunica
12	Stion	Oct-17	\$75,000,000		IIFRF	Hattiesburg	Forrest
			\$236,288,450	\$6,000,000	Total: \$242,288,450		

MMEIA - MS Major Economic Impact Act; IIFRF - MS Industry Finance Revolving Fund; LWT - Land Water and Timber

* Total loss to the State = \$242,288,450 (State \$236,288,450/County \$6,000,000)

Will We Ever Get Modern Building Energy Codes for Mississippi?

If you have received and followed this Update for a period of time, you will know that I have been very dissatisfied with the status of our statewide building codes and standards and the lack of action by the Mississippi Building Codes Council. Resilient, energy-conscious buildings are good for the environment, a value to building owners, and good for economic development. Yet, we continue to fail to adopt new

editions of nationally recognized, state-of-the-art model building codes. Energy-conserving, sustainable buildings save lives and they save money, a fact that the Codes Council should realize.

The 4th Grid Modernization Index Benchmarks the States

The GridWise Alliance, in collaboration with Clean Edge, Inc., has release its fourth [Grid Modernization Index](#) (GMI-4). The Index ranks and assesses all 50 states and the District of Columbia based upon the degree to which they are moving toward a modernized electric grid as clean energy, distributed resources, smart meters, and other technology adoption expands. **Mississippi** was given an overall ranking of #36. **Mississippi** improved 7 spots from last year's #43. The report authors recognized TVA for its incentives to residential and commercial customers "to be more price aware about energy." Most notably, **Mississippi** moved from 50th to 29th in the "customer engagement" category. However, Mississippi fell to 27th in the "grid operations" category.

Kemper Update

At the November 7 MPSC regular monthly meeting, the Commissioners reviewed a [motion](#) filed by MS Power to strike the testimony of certain interveners and to expedite the decision. The Commissioners denied the motion to strike most testimonies and denied any further consideration of the motion. The MPSC will outline the decisions in an Order under 2017-AD-112.

The MPSC remains on track to start the hearing process that could decide the fate of the plant by January 2018. A [Scheduling Order](#) outlines the process that will allow commissioners to ask questions, witnesses to testify, and cross examination to occur so commissioners will have factual evidence for the terms that the company and Public Utilities Staff have proposed. Hearings on this matter shall be held before the Commission beginning at 9:00 a.m. on December 4, 2017, and could last up to two weeks. The Commission anticipates issuing a Final Order on or before its January 2018 meeting.

Regional Issues

Alternative Energy Offers Significant Benefits to Agriculture

Brian Kirksey, a cattle, ornamental shrub, and timber farmer in Amity, Arkansas, [says renewable energy is poised to play a big role in rural areas](#), including providing a significant part of the electricity needs for chicken houses, dairy operations and residences. "These are exciting times for agriculture and renewable energy," he says.

Economic Impacts from Clean Energy Nearly \$20 Billion in North Carolina

RTI International released a [report](#) detailing the economic impacts associated with clean energy development and energy efficiency initiatives in North Carolina. North Carolina consumers saved over \$2 billion in energy expenses thanks to energy efficiency programs from 2007 to 2016. The total economic impact in North Carolina from clean energy (renewable energy and energy efficiency) project development from 2007 to 2016 was \$19.9 billion. 87% of investments occurred in the state's 40 most economically distressed counties. See the [economic impact summary](#).

Tour of Morehouse BioEnergy – Bastrop, Louisiana

I recently had the opportunity to tour the Drax BioMass Morehouse BioEnergy wood pellet production facility. The facility can produce 525,000 tons of pellets annually with 70 employees on site. Hundreds of other jobs are directly and indirectly support by the plant.



Drax also operates the sister Amite BioEnergy plant in Gloster, MS and they just acquired an existing pellet production facility in LaSalle, LA. Drax exports all its product through Port Allen in Baton Rouge. Pellet fuel offers a cost-effective, clean, reliable, low cost alternative to coal.

Virginia Tech Hosts Intro to Solar Webinar

Virginia Tech recently hosted a webinar titled "A Brief Introduction to Solar Photovoltaic Investment Analysis & the 'System Advisor Model' (SAM) Decision Support Tool". The full webinar is available at <https://youtu.be/tJ4TU7rvSdQ>. The NREL System Advisor Model (SAM) portion is available at: https://youtu.be/7N_ILHXkeh8. Solar Photovoltaic Investment Analysis Extension Publication Series: <https://energizeohio.osu.edu/news/extension-resources-%E2%80%93-solar-electric-investment-analysis-bulletin-series> or <http://extensionpublications.unl.edu/assets/pdf/ec3008.pdf>

Atlanta Airport Installs First Solar Project

Hartsfield-Jackson International has [built its first solar array](#) on top of the building at the new taxi hold lot. The 250 panels, each 327 watts, cover about 4,500 square feet and are expected to generate about 100,000 kilowatt hours of electricity annually. The project cost about \$20,000. It's part of a plan to make Hartsfield-Jackson "one of the greenest airports in the world." The FAA did a glare study and communications impact study and found no objections to the project.

South Carolina to Go Big on Solar

[Cypress Creek Renewables](#) is putting forward a plan to invest over \$1.5 billion to develop and build 2,000 MWs of solar across 80 projects in South Carolina. Together, these 80 projects will create nearly 10,000 construction jobs and power over 600,000 homes with renewable energy. Cypress Creek will also launch a partnership with Greenville Technical College in order to grow South Carolina's solar workforce and spur the state's economy.

Alabama WSFA News Investigates the Obstacles Consumers Face to Go Solar

Solar power has grown in popularity thanks to declining equipment costs. According to one study, Alabama has the 19th best solar potential in the country. But in Alabama, there are several obstacles that can reduce a solar power customer's overall savings. WSFA in Montgomery takes a look at the [challenges facing consumers](#) who want to go solar in Alabama.

Resilience is Military's New Energy Focus

The nation's largest energy consumer - the U.S. military - has long prioritized energy efficiency and developing renewable energy for practical reasons: distributed renewable energy generation are less vulnerable to attack and provides security against disruptions to the wider electric grid. Resilience – the ability to prepare for and recover from power disruptions with minimal impact – is particularly relevant to military installations in the Southeast. The "[Southeast Region Military Energy and Environmental Roundtable](#)" evaluated this goal.

Gainesville Regional Utility Purchases Biopower Plant

Gainesville Regional Utilities has [purchased](#) the 102.5-MW biomass power facility for \$750 million from the Gainesville Renewable Energy Center consortium. The facility began operation in 2013 and has been selling all of its energy, capacity, and environmental attributes to GRU under a 30-year power purchase agreement. Residents could expect an 8 to 10% decrease on electricity bills through the purchase.

City of Atlanta Reveals Resilience Strategy

Entitled [Resilient Atlanta: Actions to Build a More Equitable Future](#), the strategy serves as a roadmap to better prevent and adapt the city to the challenges of the 21st century, which include extreme climate events such as major floods or heat waves, terrorist threats, and long-term chronic stresses such as income inequality, lack of affordable housing, or the effects of climate crisis. The strategy composes more than 55 short-term and long-term actions.

St. Louis Latest City to Commit to a 100% Renewable Energy Future

St. Louis aldermen have [approved a measure](#) committing the city to transition to 100 percent clean, renewable energy by 2035. St. Louis now gets 5 percent of its energy from clean, renewable sources. The approved measure calls for the city to develop a plan by December 2018 on how to achieve the goal.

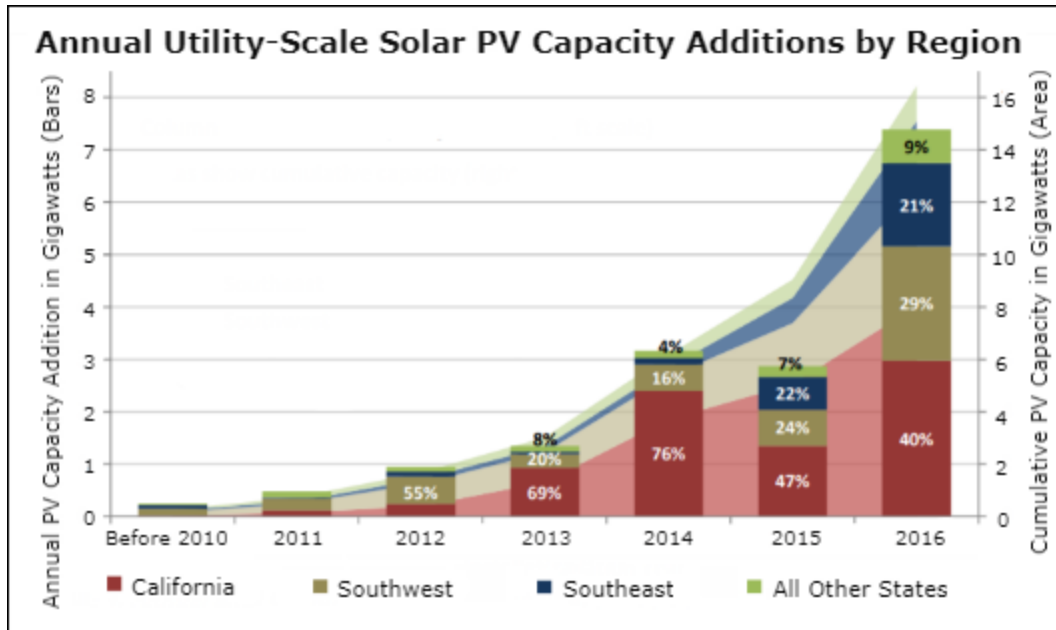
Reduce Demand Charges with Renewable Energy + Energy Storage

While we know that energy efficiency measures and load shifting will help large energy consumers save on utility energy demand fees, companies can take savings a step further with a solar + storage project. A momentary spike in demand can trigger a very high fee for the customer. The fees for that momentary capacity can amount to half of a customer's bill in some cases. With storage, you can shave peak energy demand needs. The storage system can anticipate when power use is about to spike, and it flips on the battery, thus keeping the demand on the system low enough to avoid [demand charges](#).

More Southern Utilities Investing in Renewables

Utilities around the country have closed an increasing number of aging coal-fired generators, and wind and solar have become the fastest-growing sources of electricity in the U.S. Customers want diversity in energy, see energy independence as a driver, and it doesn't hurt that utility-scale solar prices have dropped below \$1 per watt for the first time.

Mississippi is expected to gain more than 700 megawatts of solar capacity over the next five years. North Carolina now has the second-largest solar market in the U.S. Georgia added more than 1,000 megawatts in 2016 and has a cumulative total of about 1,500 megawatts of solar. Florida, Arkansas and South Carolina are also moving forward with large-scale solar.



Source: Utility-Scale Solar 2016, Lawrence Berkeley National Laboratory

National Issues

Tax Reform and Its Impact on Clean Energy

Clean energy groups are still trying to grasp what's in the recently passed U.S. House tax reform bill. What we do know is that renewable energy did not fare well. The production tax credit (PTC) for wind and certain solar projects were cut nearly in half, falling from 2.3 cents/kwh to 1.5 cents/kwh. The commercial solar investment tax credit was repealed. Tax credits for electric vehicles was repealed. Additionally, biodiesel stakeholder efforts to secure an extension of the \$1 per gallon biodiesel blender's tax credit failed. Greentech Media [breaks down](#) how the 429-page House tax bill could impact wind, solar, utilities, electric vehicles and more. Attention now turns to the U.S. Senate as the Finance Committee is working its way through nearly 300 amendments to its own bill. Thus far, the Senate bill largely sidesteps changes to energy provisions while leaving out key incentives. Some senators are eyeing a separate comprehensive tax-extendors package for later consideration.

Federal Agencies Release Climate Science Reports

The Trump Administration released the 4th National Climate Assessment report, the nation's most authoritative assessment of climate science. [Climate Science Special Report](#) (Volume I) details the findings of the U.S. Global Change Research Program. Read the [Executive Summary](#). Climate Change Impacts, Risks, and Adaptation in the United States (Volume II) is a technical, scientific assessment of climate change-related impacts, risks, and adaptation and is currently in draft form and open for [public comment](#). Among Volume I key findings are the following:

- Global annually averaged surface air temperature has increased by about 1.8°F (1.0°C) over the last 115 years (1901–2016). **This period is now the warmest in the history of modern civilization.**
- It is extremely likely that **human activities, especially emissions of greenhouse gases, are the dominant cause of the observed warming since the mid-20th century.**
- **Global average sea level has risen by about 7–8 inches** since 1900, with almost half (about 3 inches) of that rise occurring since 1993.

- Global sea level rise has already affected the United States; **the incidence of daily tidal flooding is accelerating in more than 25 Atlantic and Gulf Coast cities.**
- **Heatwaves have become more frequent in the United States since the 1960s, while extreme cold temperatures and cold waves are less frequent.**
- **Heavy rainfall is increasing in intensity and frequency across the United States and globally and is expected to continue to increase.** The largest observed changes in the United States have occurred in the Northeast.
- **The incidence of large forest fires in the western United States and Alaska has increased since the early 1980s and is projected to further increase** in those regions as the climate changes, with profound changes to regional ecosystems.

Dept of Energy to Produce Net Metering Report for Congress

The DOE is working on a [study to Congress](#) weighing the cost and benefits of net energy metering (NEM). The provision was included in the Energy and Water appropriations bill for fiscal 2017. Congress ordered the study as part of DOE's Grid Modernization Initiative under former Energy Secretary Ernest Moniz. The study will now be led by Sean Cunningham, director of the DOE Office of Energy Policy and Systems Analysis, and a former lobbyist for the Ohio utility FirstEnergy Corp. Renewable energy and customer-owned clean energy advocates are concerned that the study will not address information on "costs and benefits of distributed solar generation beyond distributed solar's impact on net metering" or "indirect cost/benefits" (e.g., societal impacts, network effects, job creation, grid resiliency).

Commissioners Recommend Solar Tariffs and Quotas in Trade Case

At the end of October, the U.S. International Trade Commissioners announced their recommended tariffs, quotas and other recommendations for solar modules imported into the U.S. from anywhere else in the world. The [various recommendations](#) will be sent the President. He has the authority to adopt the recommendations as is, in part, or not at all. President Trump must render his decision by mid-January but could make a decision earlier than that.

Electric Vehicle Charging Points now Exceed 50,000

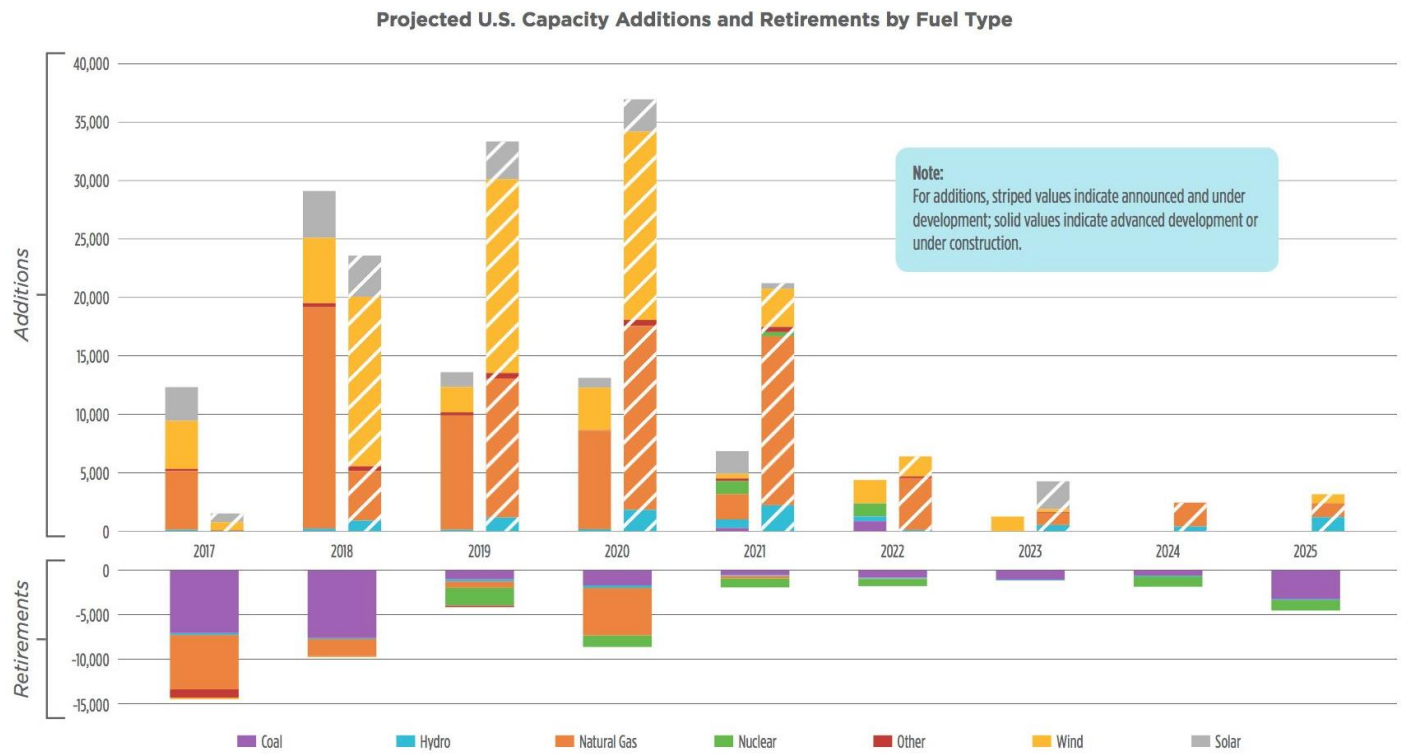
A new report on the status of the U.S. EV charging industry - [The State of the Charge](#) - is giving us a new look at the market and confirms that over 50,000 charge points (public and private) are now in operation in the country. 'Electrify America', a VW subsidiary created as part of the German automaker's settlements over its use of emission test cheating devices in its diesel vehicles, is expected to accelerate the charging station buildout.

Americans for a Clean Energy Grid Release Policy Priorities

Expanding and strengthening America's high-voltage network is essential to achieving critical economic, national security, and environmental goals. ACEG's [new policy agenda](#) identifies the priorities for meeting these objectives.

The Transmission Grid is Changing to Prepare for Distributed Generation

The recent surge in utility-scale renewables, plus a range of distributed resources like batteries, rooftop solar, electric vehicles and microgrids, has spurred new grid modernization activities. From 2011 to 2016, spending on distribution infrastructure grew by 8.6% and spending on transmission infrastructure grew by 16%. Often, utility-scale wind and solar are simply the cheapest options. And many utilities are planning for those resources to dominate their procurement as more coal and nuclear plants retire.



Sources: SNL Financial; ScottMadden analysis

‘Blocking the Sun’ Documents Efforts to Undermine Rooftop Solar

The new report – [Blocking the Sun](#) – documents the efforts of organizations and utilities across the U.S. to roll back key policies driving solar power over the past year. The American public has demanded solar power because it is clean and increasingly affordable, with costs down two-thirds over the past decade. But groups have pushed state officials to lower credits to solar users, add special charges to rooftop solar owners and move solar-owning customers into rate classes that would reduce the benefits rooftop solar can provide on electricity bills. The NC Clean Energy Technology Center's [“50 States of Solar; Q3 2017 Quarterly Report”](#) found that the trend to create separate rate classes for solar customers could lead to new charges and rate designs specifically targeting solar owners.

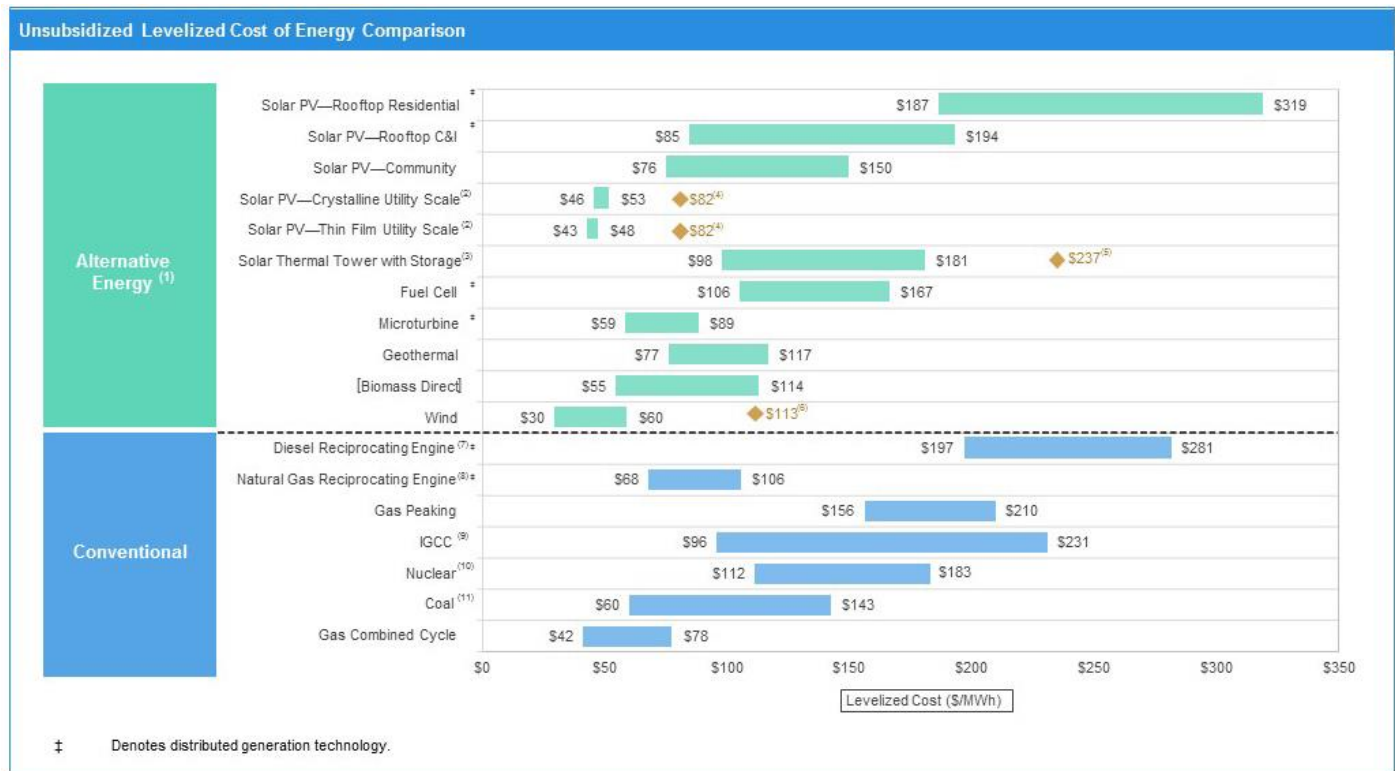
Energy-Efficient Construction is Key to Lowering Urban Emissions

A new MIT report, [Intersecting Residential and Transportation CO2 Emissions](#), has found that it will be easier for cities to reduce emissions through the implementation of new energy-efficient construction standards, the building of more multifamily homes, and the retrofitting of homes to save energy, rather than attempting to significantly alter transportation systems. Efforts to get drivers out of their cars incurs to much political pushback.

Lazard’s Annual Levelized Cost of Energy Analysis

Lazard’s latest annual [Levelized Cost of Energy Analysis](#) (LCOE 11.0) shows a [continued decline in the cost of generating electricity from alternative energy technologies](#), especially utility-scale solar and wind. Global costs of generating electricity from alternative energy technologies continue to decline. As

LCOE values for alternative energy technologies continue to decline, in some scenarios the full-lifecycle costs of building and operating renewables-based projects have dropped below the operating costs alone of conventional generation technologies such as coal or nuclear.



New Connection Technology Is Cutting Cost of Residential Solar Installations

A new and simpler technique for connecting solar arrays and other renewable energy systems to the grid comes to us through the ConnectDER. The ConnectDER “collar” plugs into the meter socket, typically on the outside of the house, and then the meter plugs into the ConnectDER. The new technology can cut out \$1,000 to \$2,000 worth of cost in the system because you don’t need electricians to drill through walls or foundations, rearrange the service panel, or add new equipment.



International News

Costa Rica Celebrates 300 Days of Renewable Energy

Costa Rica has hit a major milestone: 300 days of renewable energy use, cracking its previous record of 299 days in 2015. So far this year, the country's energy has come from hydro (78.26%), wind (10.29%), geothermal (volcanoes, 10.23%) and solar or biomass (0.84%). The remaining 0.38% early in the year came from the fossil fuel-powered thermal plants, which now have gone unused for 300 days.