

Mississippi Renewable Energy and Energy Efficiency Update

Mississippi Issues

TVA Energyright Solutions to Host Industrial Energy Efficiency Workshops

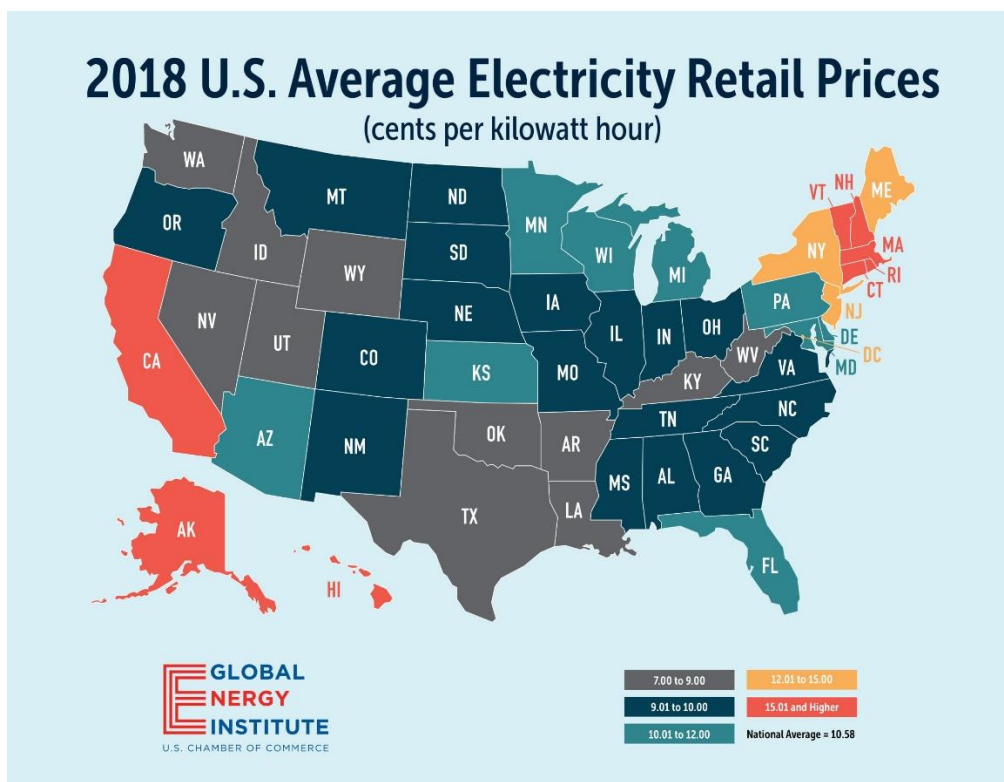
[TVA Energyright Solutions](#) is providing an opportunity for managers to learn more about tools, programs and services available that could benefit your company and help it to be more profitable and efficient. The [Industrial and Commercial Forum](#) will be held April 2 in Tupelo, MS.

The second day will be [Compressed Air Challenge Training](#) on April 3. This is a great course to help you learn how to better manage you compressed air system. There **is no cost to anyone served in the TVA footprint for this training**. Lunch will be provided both days. Follow the links above to register.

U.S. Average Electricity Retail Prices

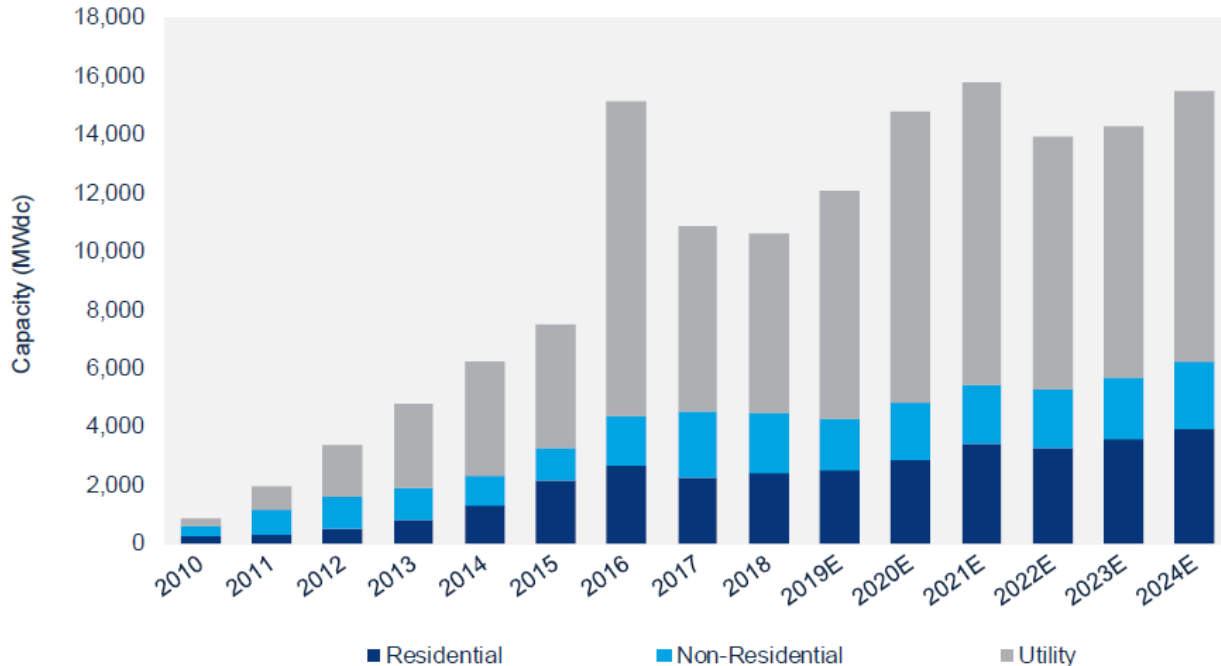
The U.S. Chamber of Commerce has released the latest version of its [annual U.S. electricity price map](#). Using the most recent full year of data available (2018) from the U.S. Energy Information Administration, the map gives insight into what electricity costs across the country. While the energy mix available within a state will play a large role in state electricity prices, energy policies in some states can greatly influence the price of electricity for consumers and businesses. The national average price of electricity is 10.58 cents per kilowatt hour (cents/kWhr).

According to this [data](#), **Mississippi's** average statewide retail electricity price across all customer classes is 9.32 cents/kWhr. This is an increase from 2017's average statewide retail price of 9.09 cents/kWhr. The average price per each customer class sector is as follow: **For Residential, 11.25 cents/kWhr; For Commercial, 10.51 cents/kWhr; For Industrial, 6.11 cents/kWhr**. Of course, utility by utility data would provide a much clearer picture of electricity costs across the state.



Mississippi Ranked 41st in Solar Installations in 2018

[For the third year in a row](#), the U.S. solar industry installed double-digit gigawatts (GW) of solar photovoltaic capacity, with [10.6 GW coming online in 2018](#). The amount was a 2 percent decrease from 2017. However, the forecast shows the market rebounding in the years ahead.



California once again led the way, installing over 3.3 GW of solar capacity, followed by Texas (996), North Carolina (907) and Florida (850 MW). **Mississippi** ranked 41st in the nation in solar capacity installations on 2017. Dropping from 15th in the nation in 2017. According to a sun index developed for the National Renewable Energy Laboratory (NREL) using data provided by NREL's Renewable Resource Data Center, **Mississippi** ranks 10th in the nation in [Solar Power Potential!](#)

The U.S. is now home to over 64 GW of installed capacity, which is enough to power more than 12 million homes.

Mississippi Solar Jobs Fact Sheet Available

Last month, the Solar Foundation has released its National Solar Jobs Census for 2018. This month, an updated map on the number of solar jobs in every state, metropolitan area, county, and congressional district, revealing how solar energy is supporting local economies nationwide. The interactive map can be viewed at SolarStates.org. Also, the **Mississippi [Solar Jobs Census 2018 Fact Sheet](#)** provides information on the number and type of solar jobs, capacity and contribution of solar power, and policies that drive or hamper solar development. Mississippi has a small solar workforce today, but the state has an abundant solar resource and enormous potential for growth.

Forrest County Schools Take First Step in Bid to Go Solar

The Forrest County School District Board of Directors have [signed a grant agreement](#) that could provide up to \$250,000 for the installation of solar equipment at one or more school buildings. The signed documents will now be submitted to the grant program administrator. If approved, initial funding will be sent to the school district to start an engineering study and solar schematic design. The grant is

available for any educational institution served by Mississippi Power Co. through a settlement resulting from the Kemper County Lignite Coal Plant. Contact Amy Perry Illing at the Knight Foundation at aperry@mgccf.org for more information about this grant program.

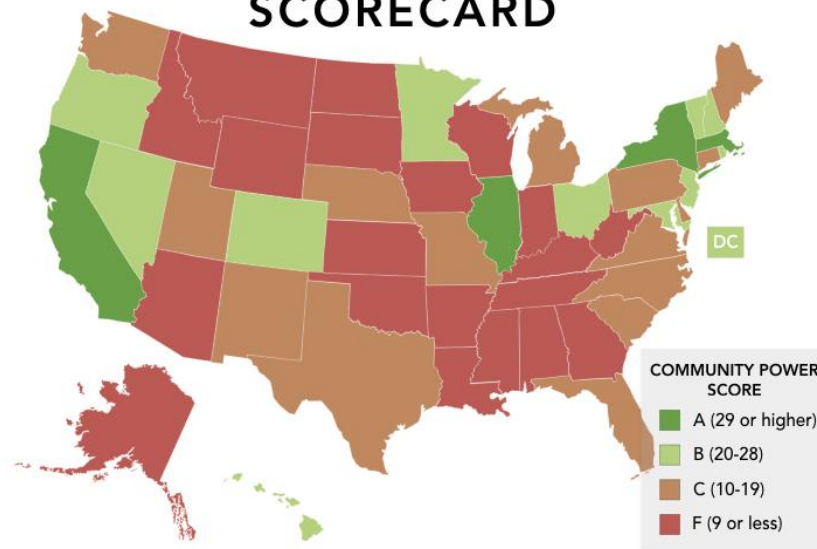
Lauderdale County Schools Approve Solar Panel Trial

The Board of the Lauderdale County School District [approved a renewable energy grant](#) that will allow solar panels to be installed on one its campuses. The Gulf Coast Community Foundation Grant will pay up to \$200,000 for the project, which will cover the solar panels and a feasibility study. West Lauderdale Elementary school is one of the sites being considered for the solar pilot project.

The 2019 Community Power Scorecard

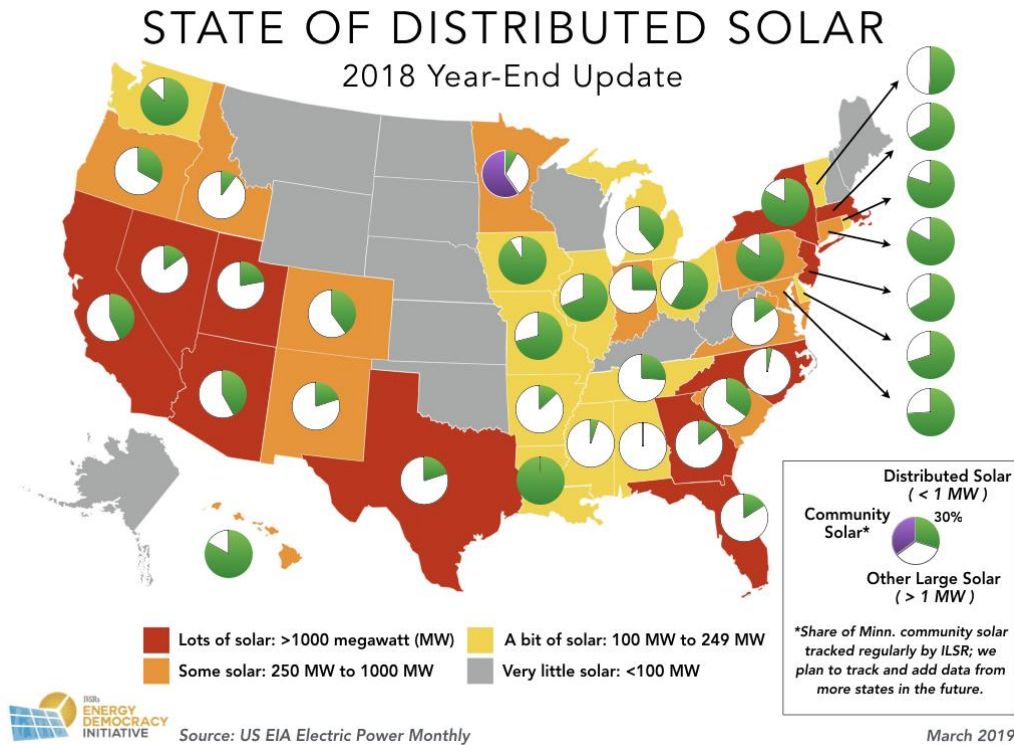
Each year, the Institute for Local Self-Reliance tracks and scores states based on their energy policies and how these policies help or hinder local clean energy action. Details about scoring methodology are available on the [Community Power Map](#). **Mississippi** scored 6 out of a possible 38 points. However, Mississippi was not last – as is often the case in clean energy rankings. The states of LA, AL, SD, ND, KS and TN had worse scores than that of Mississippi.

2019 COMMUNITY POWER SCORECARD



The State(s) of Distributed Solar — 2018 Year-End Update

The following map illustrates the size of each state’s solar market at the end of 2018 with pie charts that show the corresponding share of smaller distributed solar systems (<1 megawatt and smaller). Exploring this map, we can see which states have the largest shares of distributed solar (green part of pie chart), investments that help build wealth locally and allow individuals and communities to take greater ownership over their energy future. **Mississippi’s** solar market is dominated by large, utility-scale solar. Whereas in Louisiana, the nearly all solar is represented by small-scale, roof top solar energy systems.



Public Comments on Volkswagen Settlement Beneficiary Mitigation Plan

Last month, the Mississippi Department of Environmental Quality (MDEQ) [released](#) the Volkswagen Settlement Beneficiary Mitigation Plan for public review and comment. The Beneficiary Mitigation Plan describes Mississippi's goals and strategies in spending its portion of funds (\$9,874,414) to support mitigation projects to replace older diesel emission sources with cleaner technology to reduce excess nitrogen oxide (NOx) emissions and improve air quality in the state. A copy of the proposed plan is available at <https://www.mdeq.ms.gov/air/vw-mitigation-trust/>. The comment period ended March 26, 2019.

Review of MPSC Regular Meeting – March 5

On March 5, the MPSC held its regular docket meeting. While it was a [short agenda](#), the Commission did take action on the following:

Docket No. 2018-AD-141: Aggregators of Retail Customers – Under this docket, the Commission has issued an [Order](#) that Aggregators of Retail Customers (ARCs) are not allowed to register electric customers for 120 days for the purpose of aggregating and presenting demand response resources in wholesale markets. While FERC has recognized that it is up to state regulators to determine whether third-party ARCs within their state should be eligible to represent customers in wholesale markets and under what conditions, the Commission requires time to study this issue.

Docket No. 2017-UA-115: Atmos Energy Infrastructure Expansion – The Commission previously authorized Atmos to spend up to \$5 million annually for the purpose of making natural gas service available to new customers. This current [Order](#) modifies the project selection criteria used in the Infrastructure Expansion Initiative.

Next [Meeting](#) of the MPSC will take place on April 2, 2019, at 10 am in the Woolfolk Building.

Other Recent Docket Actions at the MPSC

Docket No. 2018-AD-68: Mississippi Power Co. Operations Review – Consultants have been selected and the audit is still being completed. The consultants are now beginning Phase II which requires the Commission review and approve the specific evaluation procedures proposed by the consultants. The consultants shall then perform the review as approved and provide results of its findings.

Docket No. 2018-UN-205: Entergy Mississippi's Certificate of Notice to Customers - Entergy Mississippi [certifies that it has completed notification](#) to its customers of its Intent to change rates and revise its formula rate plan to recover the purchase and ownership costs of the Choctaw Entergy Facility. If approved by the Mississippi Public Service Commission, the filing is expected to result in a net rate increase of approximately \$2.50 per month for 1,000 kWh of electricity usage by a typical residential customer. The Choctaw Energy Facility is an 810-megawatt combined cycle natural gas turbine unit located near French Camp, Mississippi. The purchase price of the facility is \$314 million plus other expenses. Entergy Mississippi filed a [Petition for CPCN](#) to purchase the Choctaw Entergy Facility under Docket No. 2018-UA-204.

Docket No. 2019-UA-21: SR Meridian I – On January 31, Silicon Ranch filed a [Facility Application](#) for the construction and operation of a 1.0 MWdc solar photovoltaic generation facility on the Naval Air Station Meridian base in Lauderdale County, Mississippi. The project investment is estimated at \$600,000. The entire electricity output will be sold to the Tennessee Valley Authority ("TVA") under a 20 year power purchase agreement.

Docket No. 2019-UA-22: SR Meridian II - On January 31, Silicon Ranch filed a [Facility Application](#) for the construction and operation of a 5.0 MWdc solar photovoltaic generation facility on the Naval Air Station Meridian base in Lauderdale County, Mississippi. The project investment is estimated at \$3,200,000. The entire electricity output will be sold to the Tennessee Valley Authority ("TVA") under a 20 year power purchase agreement.

Entergy MS Files Proposal for Community Solar Program and Special Rate Tariff (Docket No. 2018-UN-268)

Recently, Entergy Mississippi, LLC [proposed a community solar offering](#) for its customers. In [testimony](#) provided by Aaron E Hill, Entergy Mississippi, LLC “proposes to use the Bright Future Solar Project sites to support the community solar offering.” The Bright Future Solar Project consists of three existing 500 kW pilot project sites. 25x'25 has concerns regarding the use of these sites to support a community solar program. Therefore, 25x'25 filed a [Motion to Intervene](#).

Entergy Corp. Releases its Climate Change Risk Analysis Report

In its [CLIMATE SCENARIO ANALYSIS AND EVALUATION OF RISKS AND OPPORTUNITIES](#) report released this month, Entergy Corporation recognizes the challenges posed by climate change and describes how it is preparing its “business and operations to adapt to a changing climate and to thrive in a carbon-constrained economy.” Furthermore, Entergy is pledging to achieve a 50 percent reduction in emission rate (pounds of CO₂ per megawatt hour) from its 2000 level by 2030. Entergy has proposed several pathways that will work collectively to achieve this goal.

What will be the Issues Important to Clean Energy in the 2019 Legislature?

The Mississippi Legislature gavelled in on January 8 for the final session of this four-year term. While many assume that it will be a fairly quiet year before election season, some are not so sure. It will be interesting to see who puts forth legislation that aims to establish policy positions to carry into the election cycle. We do know one topic that will have the attention of policymakers: Allowing rural electric cooperatives to [offer services such as high-speed internet access](#) and other broadband technologies in rural areas. Why is broadband important to energy customers? Homeowners and businesses can find and implement energy efficiency solutions through smart technologies and data access to better manage load and reduce peak demand. Legislation of interest:

[HB 44](#) and [HB 441](#): Feasibility of Windmills in Sunflower County – **Died in Committee**

[HB 51](#), [HB 459](#), HB 475, HB 604, HB 697, HB 832, HB 882, HB 907, [SB 2002](#), [SB 2265](#): Repeal of Electric and Hybrid Vehicle Tax – **All Died in Committee** (no tax cut for EV and hybrid vehicle owners!)

[HB 366](#): Mississippi Broadband Enabling Act – **Passed House; Passed Senate; Signed by Gov**

[SB 2020](#): Reconfigure Size and Staff of MPSC – **Died in Committee**

[SB 2087](#): Authorize State Tax Credit for Installation of Solar and Energy Efficiency Equipment – **Died in Committee**

[SB 2393](#): Revise Powers and Duties of Public Utilities Staff – **Died in Committee**

HB 1362:

[HB 1641](#): FY 2020 Appropriation; Public Service Commission – **Passed House; Passed Senate**

[HB 1642](#): FY 2020 Appropriation; Public Utilities Staff – **Passed House; Passed Senate**

Interactive Map of U.S. Power Plants Available

A new version of Synapse's Interactive Map of U.S. Power Plants is available at Google Earth. The map displays information on location, fuel type, electric generation, generating capacity, ownership, and emissions for over 9,100 power plants across the country. To download the updated map, visit <http://www.synapse-energy.com/tools/interactive-map-us-power-plants> and complete the form.

New Report Questions Integrity of Coal Ash Sites; Mississippi Sites Named

A new report on [potential coal ash impacts on groundwater](#) claims to have identified groundwater contamination at four Mississippi sites. One site in South Mississippi, the R.D. Morrow, Sr. Generating Station in Purvis, ranked ninth worst in the U.S. for coal contamination in the report. (Plant Morrow coal units were retired in 2018 and is seeking approval to convert to natural gas) See Cooperative Energy's [response to the report's claims](#). The three other sites in Mississippi are the Choctaw Generation Limited Facility in Ackerman, Plant Watson in Gulfport and Plant Victor Daniel in Escatawpa. The management and adverse impacts of coal ash landfills and disposal pits have been in the public spotlight since the massive TVA Kingston coal ash spill in Tennessee, Duke Energy's Dan River facility coal ash spill in North Carolina, and the coal ash pits inundated after Hurricane Florence in North Carolina.

New Energy Info Resources for Rural States, Local Govts, and K-12 Schools

The U.S. Department of Energy (DOE) released two resources to help rural states, local governments, and K-12 schools achieve energy and cost savings from energy efficiency and renewable energy upgrades. The new [Rural Resources for States, Local Governments, and K-12 School Districts](#) webpage offers information and resources on technical assistance programs, case studies, and applicable examples. Topics include energy planning, energy efficiency financing, energy data management, outdoor lighting, and wastewater infrastructure. The new Better Buildings [Energy Efficiency and](#)

[Renewable Energy Resources for Rural K-12 School Energy Managers and Educators](#) includes information that addresses the unique opportunities and challenges rural K-12 schools face and compiles some best practices and solutions to foster energy and cost savings in rural schools.

Keesler AFB Awards \$32 Million Energy Saving Performance Contract

[Nearly \\$70 million in total cost savings will be provided to Keesler](#) Air Force Base over the 22-year financed term of the contract with Noresco LLC and reduce annual installation energy usage by nearly 16 percent. Major upgrades and improvements will be made to the bases' energy infrastructure, including interior and exterior lighting, HVAC systems and controls. The package also includes a 1.5 MW solar array to be installed on a new covered parking structure.

Regional Issues

TVA Releases Draft Integrated Resource Plan (IRP) and Environmental Impact Statement (EIS) For Public Review and Comment

Tennessee Valley Authority (TVA) has released its [draft 2019 Integrated Resource Plan](#) (IRP) and [Environmental Impact Statement](#) (EIS) and is inviting the public to review the draft documents and provide comments. **TVA is accepting comments through April 8, 2019.**

The 2019 IRP provides direction on how TVA can best deliver clean, reliable and low-cost energy in the Valley over the next 20 years. As part of the study, TVA prepared a programmatic EIS to assess the natural, cultural and socioeconomic impacts associated with the IRP. [Visit TVA's IRP website](#) to learn more about the IRP and EIS, read the draft and offer your comments.



TVA hosted several [public meetings](#) throughout the Tennessee Valley over the months of February and March to gather public feedback on the IRP and EIS. But none of those meetings were scheduled for Mississippi. TVA sells power to 14 cooperatives and 14 municipalities in [Mississippi](#) that represent 18% of TVA service area. One would think that TVA would be interested in what Mississippians would have to say about the role of conventional energy, renewable energy and energy efficiency in the proposed IRP.

Alabama “Smart Neighborhood” is Collecting Home Energy Use Data

Reynolds Landing is a suburban community just outside of Birmingham, Alabama. Alabama Power, the Electric Power Research Institute (EPRI), and Oak Ridge National Laboratory (ORNL) have teamed up with homebuilder Signature Homes and equipment vendors to design [an energy-efficient, connected neighborhood](#) with 62 single-family homes supported by a 1-megawatt microgrid. The microgrid comprises a 400-kilowatt ground-mounted solar PV array, a 600-kilowatt-hour battery storage system, and a 400-kilowatt natural-gas generator. Homeowners agree to share circuit-level end-use data with Alabama Power and its research partners for two years and meet face-to-face with researchers monthly to solicit feedback on what they like or dislike about the homes.

Entergy New Orleans Piloting Residential Low-Income Solar Program

Entergy New Orleans is [piloting a new program](#) that puts solar panels on the rooftops of low-income customers' homes and gives them a \$30 credit on their energy bills every month, rain or shine. Through partnership with local vendors, Entergy New Orleans will:

- Install the rooftop solar system at no cost to customers.
- Stand behind the installation quality and provide all system maintenance.

- Educate customers on the benefits of the program and how the system operates.
- Remove the system with a 90-day notice at any point.

Arkansas Legislature Approves New Solar Financing Tools

The Arkansas Legislature gave final approval to [Senate Bill 145](#). The legislation [enables third-party financing](#) for those seeking to deploy solar. With the option of a third-party solar services contract, non-tax entities could take full advantage of federal incentives and lower the cost of a solar array, unlocking capital to invest in local communities. The bill also raises the solar facility size limit from 300 kW to 1 MW for non-residential customers. [Learn how it happened.](#)

The Legislature also passed [House Bill 1636](#), which would enhance the state's energy performance contracting program by providing public entities with additional flexibility and the opportunity to utilize guaranteed energy savings to improve the energy and operational efficiency of their existing facilities without the need for upfront capital. These bills were signed into law by the Governor.

Entergy Arkansas Announces New 100 MW Project for Sercy, AR

Entergy Arkansas and NextEra Energy Resources LLC [plan to build a 100-megawatt solar energy facility](#) in White County near Sercy pending approval by the Arkansas Public Service Commission. The 800-acre facility is expected to begin operating by 2021. The Sercy project will also include an array of lithium-ion batteries capable of storing up to 30 megawatt-hours of electricity.

Farmers Electric Latest Arkansas Cooperative to Install Solar

Farmers Electric and Today's Power [broke ground](#) on a 1 MW single-axis solar farm covering 8 acres with 4,000 panels. Today's Power will build, own and operate the system while Farmers Electric will buy the power at a fixed price, expecting to save cooperative members \$80,000 a year.

Farming the Sun

Arkansas Agriculture magazine's cover story, "[Farming the sun: How solar technology is changing Arkansas agriculture,](#)" features solar systems implemented at Hornbeck Farms and Tillar & Co. Farms.

Virginia Legislature Enacts Changes to Net Metering, Energy Efficiency

The Virginia Legislature had a busy year. [HB2547](#) makes changes to the net-metering program for customers of electric cooperatives, including raising the net-metering cap to 7% of system peak and permitting customers to install enough renewable energy to meet up to 125% of previous year's demand. However, cooperatives will begin imposing demand charges on customers with solar, to be phased in over several years. [HB 2621](#) authorizes a locality to require the owner or developer of a solar farm, as part of the approval process, to agree to a decommissioning plan. [HB 2741](#) establishes a rebate program for low and moderate-income households that install solar. [HB2792](#) creates a 6-year pilot program for municipal net metering for municipal buildings that are customers of regulated utilities. [HB 2293](#) establishes a stakeholder process to provide input on the development of utility energy efficiency programs. [HB 2332](#) protects customer data collected by utilities while allowing the use of aggregated anonymous data for energy efficiency and demand-side management efforts.

Kentucky Legislature Rolls Back Net Metering

[Senate Bill 100](#) would change how people with solar panels on their houses get compensated for putting energy back onto the power grid. Currently, households receive credits equal to the retail rate of power. Opponents to the bill said it re-writes the rules to [favor monopoly utilities and restrict Kentuckians'](#)

[ability to choose](#) where they get their energy. It does so by gutting an existing law, known as net metering.

Missouri PSC Approves HVDC Grain Belt Express Transmission Line

The Missouri Public Service Commission [gave the green light](#) to allow a 780-mile wind-energy Grain Belt Express transmission line to be built across Missouri. The transmission line will deliver nearly 4,000 megawatts of power from wind farms in western Kansas to parts of Missouri, Illinois and some eastern states. The Missouri PSC said the line benefits Missouri citizens, and is, therefore, in the public interest.

Atlanta Sets Goal for 100% Clean Energy by 2035

The Atlanta City Council unanimously approved a plan for all city facilities to operate on clean energy by 2035, as well as reducing electricity bills in communities experiencing high electricity burdens. Under the plan, all Atlanta government facilities, including Hartsfield-Jackson Atlanta International Airport, will be powered by clean energy. Atlanta currently receives 8% of its energy from clean energy sources. The plan will create more than 7,700 jobs and reduce monthly household electricity bills by \$234 if the city fully converts to clean energy by 2035.

Puerto Rico Passes Legislation to Go 100% Renewable By 2050

Puerto Rico's legislature gave final approval to Senate Bill 1121 - the Puerto Rico Energy Public Policy Act - which will set the island on a path to [100% renewable energy by 2050](#). One provision provides for automatic interconnection to the grid of customer-sited solar energy systems below 25 kW and reduces the utility approval time to 90 days for commercial and industrial solar projects. The changes are intended to create a more resilient island built upon state of the art technology and achieve the island's post-Hurricane María recovery vision and plan.

New Mexico Aims for 100% Carbon Free Energy by 2050

New Mexico Gov. Michelle Lujan Grisham [signed](#) into law the Energy Transition Act, which boosts New Mexico's renewable portfolio standard (RPS) and establishes a target of 100% carbon-free power by 2050. The ETA mandates an RPS of 50% by 2030 for New Mexico's investor-owned utilities and rural electric cooperatives, as well as a goal of 80% by 2040.

Southeast States Federal Solar Lobby Day – June 20

The Solar Energy Industries Association is coordinating a lobby day in Washington DC to educate Members of Congress and their staff about solar's role in energy, the economy, jobs, tax, trade issues and more. [Register & Learn More](#).

National Issues

EPA Releases Proposed Year-Round E15 Rule

The Environmental Protection Agency ([EPA](#)) [has released proposed regulatory changes](#) that would allow gasoline blended with up to 15 percent ethanol (E15) to receive a Reid Vapor Pressure (RVP) waiver for the summer months, the same as E10. Currently, E15 sales are restricted in certain markets between June 1 and Sept. 15. In the same rule, EPA is also proposing changes to the renewable identification number (RIN) compliance system under the Renewable Fuel Standard (RFS) program. Public comments on the rule must be submitted by April 29.

Solar + Wind Met Nearly 9% of U.S. Power Demand in 2018

[2018 saw more gains for wind and solar](#), which now meet 8.9% of all electric demand in the United States. Solar generation grew 25%, and now meets 2.4% of electric demand in the U.S. Wind grew at 8% but still supplied 6.5% of all U.S. electricity. **When biomass, geothermal and hydro are added in, the U.S. met nearly 18% of its demand with renewable energy.** Nuclear power provided around 19%. Three states (CA, NV, AZ) get more than 10% of its power from solar. Solar output increased 457% in Arkansas, 295% in South Carolina, **253% in Mississippi**, but as this came from a very small base the contributions to electricity demand remained negligible in these three states.

New Release: 2019 U.S. Energy & Employment Report

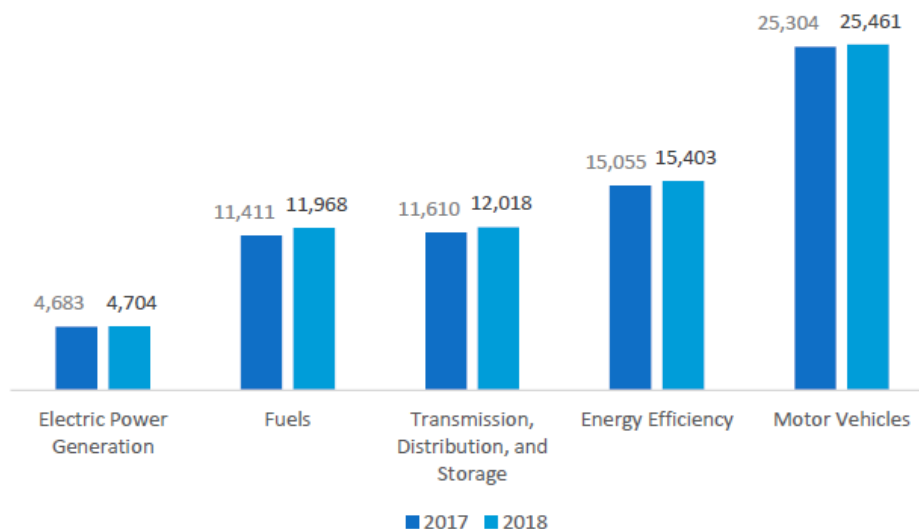


The National Association of State Energy Officials and the Energy Futures Initiative released the 2019 USEER on March 6. The survey includes data and employment trends in five key energy sectors: Fuels; Electric Power Generation; Transmission, Distribution and Storage; Energy Efficiency; and Motor Vehicles. Download the full report for free [here](#).

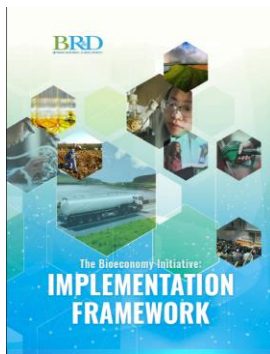
The 2019 USEER finds that the Traditional Energy and Energy Efficiency sectors in 2018 employed approximately 6.7 million Americans out of a workforce of approximately 147 million. Employment in these sectors increased by 2.3% from 2018.

Mississippi has an average concentration of energy employment, with 28,691 Traditional Energy workers statewide. The Traditional Energy sector in Mississippi is 2.5 percent of total state employment. **Mississippi** has an additional 15,403 jobs in Energy Efficiency and 25,461 jobs in Motor Vehicles. Overall, Traditional Energy jobs grew by 3.6 percent since the 2018 report, increasing by 987 jobs over the period. Energy Efficiency jobs added 347 jobs (2.3 percent) and motor vehicles added 158 jobs (0.6 percent). See the jobs per sector breakdown below.

Employment by Major Energy Technology Application



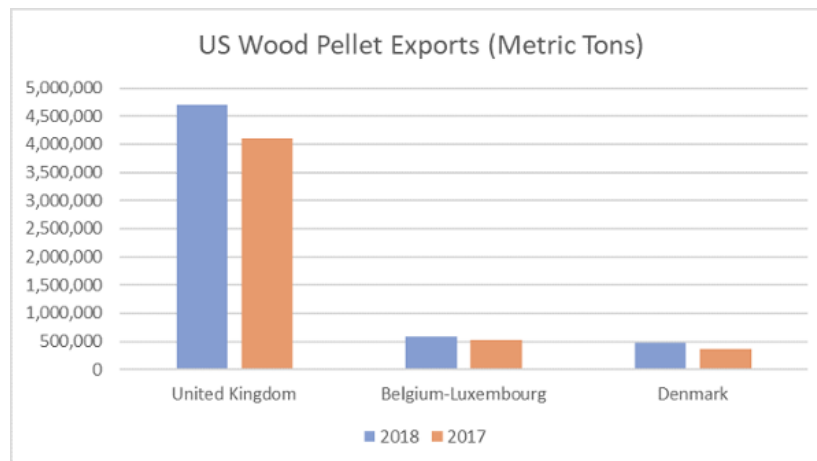
Federal Agencies Release Framework for Advancing the Bioeconomy



The federal Biomass Research and Development (BR&D) Board, an interagency collaborative which is co-chaired by the USDA and the DOE, unveiled a multi-agency strategy to accelerate innovative technologies that harness the nation’s biomass resources for affordable biofuels, bioproducts, and biopower. [The Bioeconomy Initiative: Implementation Framework](#) serves as a guiding document for member agencies to increase government accountability and accelerate innovative and sustainable bioenergy technologies in: Algae systems; Feedstock genetic improvement, production, management, and logistics; Biomass conversion and carbon utilization; Transportation, distribution infrastructure, and end use; Bioeconomy analysis and sustainability.

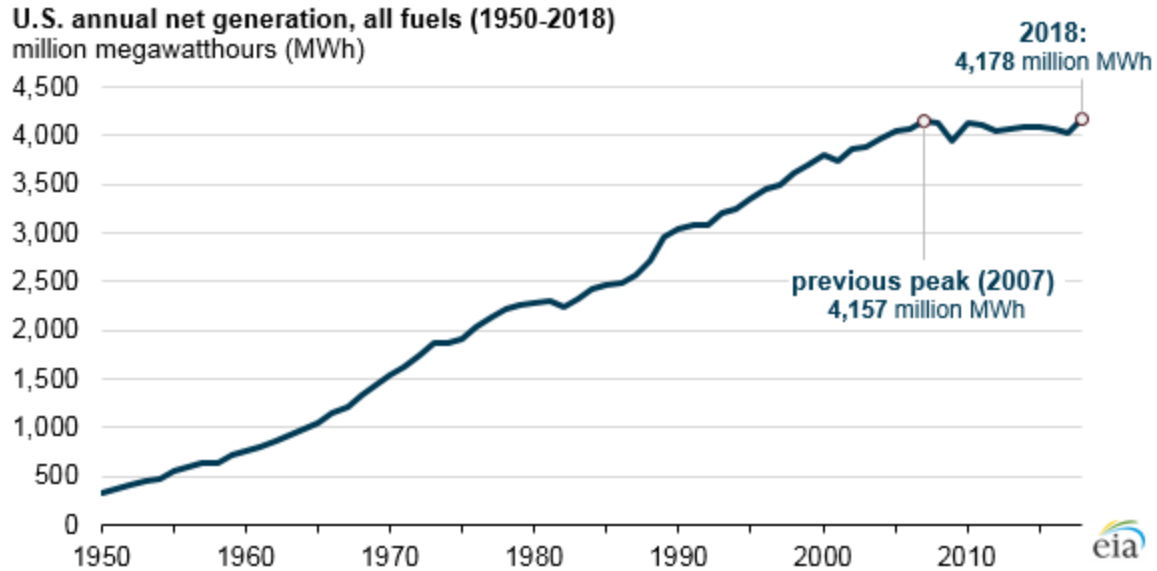
U.S. Wood Pellet Exports Grew in 2018

[The U.S. exported over 6 million metric tons of wood pellets in 2018](#), which was up roughly 17 percent over 2017. The total value of these exports increased nearly 22%, from \$666 million in 2017 to \$812 million in 2018. The United Kingdom alone imported a vast majority of the wood pellets manufactured in the U.S.—roughly 4.7 million metric tons, or nearly 78% of total exports. Export to the Asian market number will increase significantly over the next few years based on the number of new long-term off-take agreements between U.S. pellet manufacturers and Japanese bioenergy producers. Even with this production level, the wood pellet sector consumes nearly 4% of the total timber harvest in the U.S.

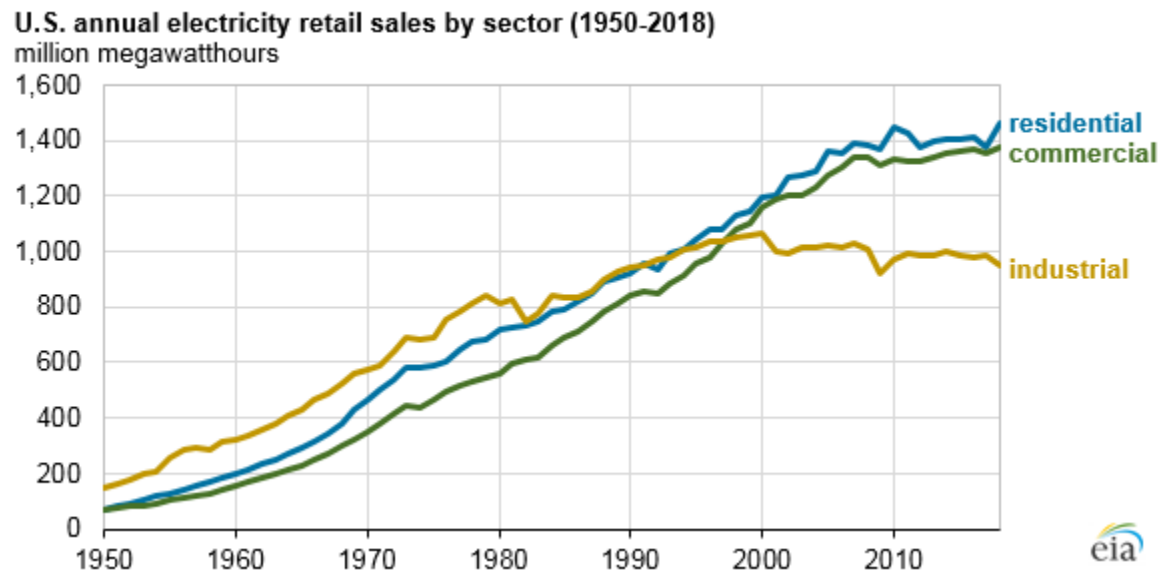


Record U.S. Electricity and Renewable Electric Generation in 2018

U.S. net electricity generation increased by 4% in 2018, reaching a record high of 4,178 million megawatt-hours (MWh), according to EIA’s [Electric Power Monthly](#). Last year was the first time total utility-scale generation surpassed the pre-recession peak of 4,157 million MWh set in 2007. Renewable energy provided 17.6% of electricity generation in the United States in 2018. [Renewable generation provided a record](#) of 742 million megawatt-hours of electricity in 2018, nearly twice as much as the 382 million megawatt-hours produced in 2008. Hydroelectric generation produced 292 million megawatt-hours in 2018 and accounted for 6.9% of total generation. Generation from other renewable resources, such as biomass and geothermal accounted for 1.9% of total generation in 2018. Nearly 90% of the rise in U.S. renewable electricity between 2008 and 2018 came from wind and solar generation.



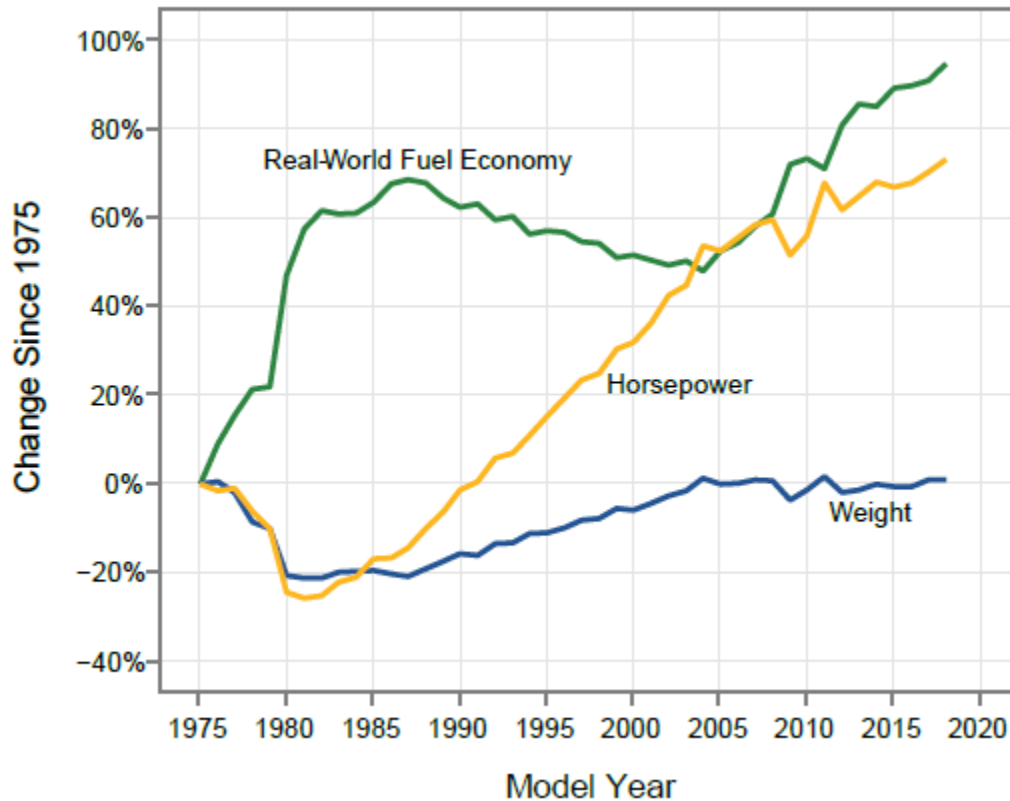
Weather is the primary driver of year-to-year fluctuations in electricity demand. The increased demand for electricity in 2018 is largely attributable to cold winters and a hot summer. Population-weighted cooling degree days, an indicator of warm weather and air conditioning demand, reached a record high in 2018. About [87% of U.S. households cool their homes](#) in the summer with air conditioning. Economic and population growth are the primary drivers of rising electricity demand, with projections for the [number of households growing 0.7% per year and commercial floorspace increasing 1.0% per year](#) from 2018 through 2050.



New Vehicle Fuel Economy is at a Record High

Twelve of the thirteen largest manufacturers selling vehicles in the U.S. market improved vehicle fuel economy between model year 2012 and 2017. Fuel economy increased by 0.2 miles per gallon to 24.9 mpg, achieving a record high. The average estimated real-world CO₂ emission rate also fell by 3 grams per mile (g/mi) to 357 g/mi, the lowest level ever measured. See the [2018 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975](#).

Estimated Real-World Fuel Economy, Horsepower, and Weight since Model Year 1975



Co-ops Fuel Economy with 612,000 Jobs and Billions Toward GDP, Report Shows

Between 2013 and 2017, co-ops employed an average of 67,800 people a year, hired about 100,600 contractors, and by extension helped provide jobs for about 170,300 people who supplied equipment and services. Another 273,100 jobs were supported through consumer spending by co-op employees, contractors and suppliers. The study, "[The Economic Impact of America's Electric Cooperatives](#)," found that, from 2013 to 2017, co-ops contributed \$440 billion to the gross domestic product (GDP), \$881 billion to U.S. sales output and \$200 billion to the nation's labor income. Electric co-op spending during the study period totaled nearly \$360 billion.