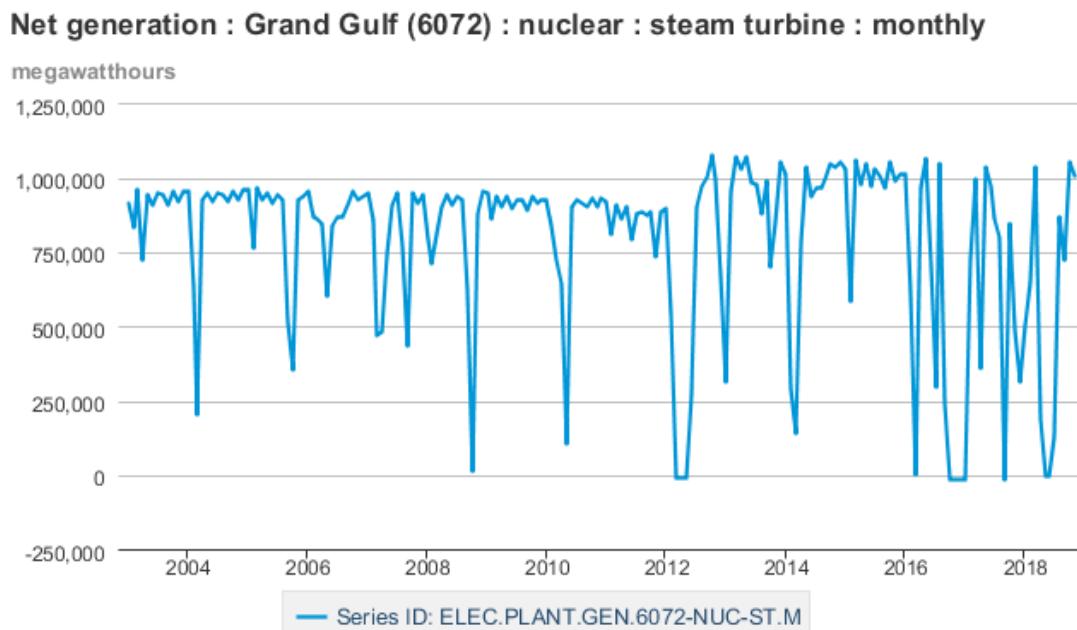


## Mississippi Renewable Energy and Energy Efficiency Update

### Mississippi Issues

#### **Check Out the Historical Performance of Power Generation Stations in MS**

For a state of about 3 million people, we have a lot of electric generation facilities in the state. Have you ever wondered about the annual or monthly performance of power plants? Through the Energy Information Agency's (EIA) [Open Data Link](#), you can discover the performance data of each electric generation station. Click on the facility you're interested in, scroll down to find net generation, and select monthly, quarterly or annual. For example, the monthly net generation of Grand Gulf:



Source: U.S. Energy Information Administration

#### **MDEQ Releases Volkswagen Settlement Beneficiary Mitigation Plan; Public Feedback Welcomed**

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/>. You can submit comments in writing to Elliott Bickerstaff, MDEQ, P.O. Box 2261, Jackson, MS 39225. The comment period begins February 15 and ends March 26, 2019.

Three public hearings have been scheduled to provide an opportunity for the public to comment on the Mitigation Plan. The public hearings are scheduled for:

- March 18 — 1:30 p.m. in MDEQ's Commission Hearing Room located at 515 East Amite Street, Jackson, 39201.

- March 21 — 1:30 p.m. in the Public Meeting Room of the Bolton State Office Building, 1141 Bayview Avenue, Biloxi, 39530.
- March 26 — 1:30 p.m. at the Batesville Public Library, 206 Highway 51 North, Batesville, 38606.

## **Energy Efficiency Case Study: Knight Nonprofit Center**

The Knight Nonprofit Center in Gulfport, MS is a 73,000 sq ft facility that provides affordable office space for over 30 nonprofit organizations. Under the MS Power Co. [Large Commercial & Industrial Program](#) administered by CleaResult, 1300 lighting fixtures were replaced with LED lights. The lighting upgrades are saving the Center an estimated 223,203 kWh/year and \$22,320 annually. With the \$12,705.73 incentive rebate, the project payback was 6.5 months.

## **Comment Period Closed on Draft Study of Actual Benefits of Distributed Generation (Docket No. 2011-AD-2)**

Late in 2018, Acadian Consulting Group, LLC (Acadian) submitted its [draft study](#) report examining its calculated actual benefits of distributed generation in Mississippi. The Acadian draft report recommends a nearly eight-fold decrease from the current 2.5 cents per kilowatt-hour (cents/kWh) "adder" to a proposed adder of 0.35 cents/kWh for Entergy customers and 0.27 cents/kWh for customers in MS Power Co. service territory. The MPSC issued an [Order Requesting Comments](#) to receive feedback regarding the study, its methodology, and its conclusions. The comment period closed on February 2.

Clean energy advocates secured Synapse Energy Economics, Inc. (Synapse) to conduct an expert review of the Acadian report. Synapse discovered that Acadian used some values and methodology that are outside of traditional norms and found that there is insufficient net metering penetration in Mississippi to effectively calculate the value of distributed generation benefits. Mississippi ranks 42nd nationally in the total installed capacity of small-scale PV. Synapse also found that adopting Acadian's recommendations would likely stymie an industry that is only just starting to get off the ground. Furthermore, Synapse found that adopting the Acadian recommendations would undercompensate net metering owners for the benefits they provide to the grid. [25x'25 filed comments](#) in support of [Synapse's report](#).

## **Comments Period Closed on Entergy MS IRP Proposed Rule (Docket No. 2018-AD-64)**

Integrated Resource Planning (IRP) establishes a framework for future generation planning and greatly increases opportunities for transparency and public participation. Entergy MS submitted for MPSC's consideration a proposed IRP Rule (EMI Rule) that would replace the MPSC's existing Rule 29 that authorizes energy efficiency programs. The MPSC issued an [Order Requesting Comments on Entergy MS's proposed IRP Rule](#). The comment period ended Feb. 15, 2019. According to the MPSC, they do not propose to adopt Entergy MS's proposed IRP Rule as its own, but merely seeks comments on its form and substance.

25x'25, with the assistance of technical experts, conducted a thorough review of the Entergy proposal and [submitted comments in response to the MPSC order](#). We have serious concerns with the proposed EMI Rule and are wary of it being the starting point for an IRP Rule. The EMI Rule does not allow sufficient time for stakeholder feedback in the IRP process. The EMI Rule provides an insufficient link between the IRP Plan and actual resource procurement decisions. The EMI Rules does not include a

mechanism for competitive solicitations for energy resource needs. These are just few of the many concerns we have with the proposed EMI Rule. See our comments for more information.

25x'25 believes the current Rule 29 should be preserved and the Commission should develop their own rule borrowing from recognized best practices and successful experiences in other states.

### **MPSC Approves MS Power Co. Net Metering Rates (Docket No. 2016-UN-133)**

On December 17, Mississippi Power Company (MPC) filed a [Notice of Intent](#) to maintain the 2.5 ¢/kWh adder in place until such time as modified by order of the Mississippi Public Service Commission. 25x'25 [filed comments in support](#) of MPC's proposed Renewable Net Energy Metering Rate, Rate Schedule RENM-1. The [Commission accepted](#) the [RENM-1 Rate Schedule](#).

### **Entergy MS Files CPCN for 100 MW Solar Project in Sunflower County; 25x'25 Files Comments (Docket No. 2018-UA-267)**

On December 20, 2018, Entergy MS filed a [Joint Petition for Certificates of Public Convenience and Necessity](#) seeking authorization of SCSP to construct and Entergy Mississippi, LLC (EML) to acquire, own, operate, improve, and maintain the Sunflower Solar Facility [near Ruleville, MS](#). The estimated total dollar investment for Entergy MS to acquire the Sunflower Solar Facility and related assets is approximately \$153.2 million. A residential customer using 1,000 kWh per month would see a net increase in rates of up to \$1.65 per month. 25x'25 filed a [motion to intervene](#) and which was [granted](#).

[25x'25 also filed comments in response to the Joint Petition for CPCN](#). In the comments, 25x'25 has asked the Commission to compare the cost-effectiveness of EML's proposed procurement and finance method against that of other energy acquisitions mechanisms such as power purchase agreements. 25x'25 also requested the Commission include a 20-year performance guarantee of the solar facility to protect consumers against costs related to system underperformance or unrealized revenues.

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

Last month, 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](#). We plan to file additional comments on this matter in the coming weeks.

### **Review of MPSC Regular Meeting – February 5**

On February 5, the MPSC met at 10 am in the MPSC Hearing Room. Items of interest to energy and consumer stakeholders ([meeting agenda](#)):

**Docket No. 2014-UN-10, Mississippi Power Co. (MPCo), Energy Efficiency Cost Recovery (EECR) Rate:** MPCo filed its [2019 rate](#) to recover energy efficiency programs related costs. These costs include program administration costs (~\$4M), Lost Contributions to Fixed Costs (~\$4M), and under-recovery of prior program costs (~\$400K). The 2019 Quick Start EE program costs will result in a 36 cent reduction in the average customer's monthly bill. The Commission [approved MPCo's EECR](#) on a 2-1 vote.

Before the vote, the Commissioners asked staff about the current progress of moving from Quick Start programs to Comprehensive Programs. Staff reminded the Commission that they voted to extend Quick

Start programs indefinitely and that there are no current plans to move to a Comprehensive portfolio of energy efficiency programs.

**Docket No. 2018-UA-189, CenterPoint Energy, CPCN for Rankin County Service Area:** CenterPoint will install new natural gas lines to serve three new subdivisions in Rankin County. The cost of the project is \$2.9M. No impact on rates is anticipated as the revenues from new customers will cover costs. Approved by the Commission.

**2018-UA-206, MPCo, CPCN for New Transmission Lines in Jackson, Lauderdale and Forrest Counties:** The three projects will total \$15.2M and will increase rates by 13 cents/month for an average customer. The Forrest County project will add redundancy in service due to a single 115kV line serving several substations. The 2017 Hattiesburg tornado exposed weaknesses in reliability when the line was severely damaged. The new line in Forrest County will improve service to Camp Shelby. Approved by the Commission.

Next Meeting of the MPSC will take place on March 5, 2019, at 10 am in the Woolfolk Building.

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

The Mississippi Legislature gaveled 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

[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

[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

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

## **Ocean Adventures Marine Park Uses Solar Power**

Ocean Adventures Marine Park, part of the Institute for Marine Mammal Studies, opened in 2018 with a 100kW roof top solar system to help offset one-third of its energy needs. The [Ocean Adventures Marine Park](#), located in Gulfport, offers guests an up-close experience with dolphins, sea lions, stingrays, sharks and birds.



## Association of Energy Engineers Looks to Start Chapter in Mississippi

Earlier this month, local Association of Energy Engineers (AEE) members organized a meeting in Biloxi to explore the process of forming a Mississippi chapter of the national organization. Those interested in participating can request more information at [AEEofms@outlook.com](mailto:AEEofms@outlook.com). You can also learn more about AEE and its programs and benefits by visiting their website [here](#).

### 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.

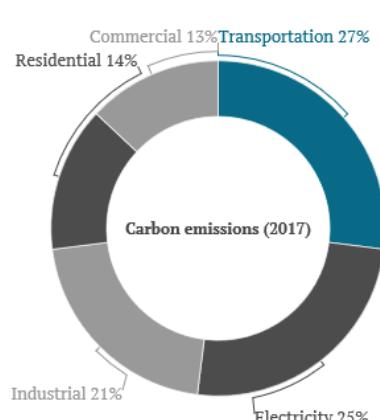
The 2019 IRP provides direction on how TVA can best deliver clean, reliable and low-cost energy in the Valley over the next 20 years. As part of the study, TVA prepared a programmatic EIS to assess the natural, cultural and socioeconomic impacts associated with the IRP. [Visit TVA's IRP website](#) to learn more about the IRP and EIS, read the draft and offer your comments. TVA will host an informational webinar on February 26 at 10 a.m. CT. [You can register here](#).

## Entergy N.O. Moves Forward with Commercial-Scale Solar on Warehouses

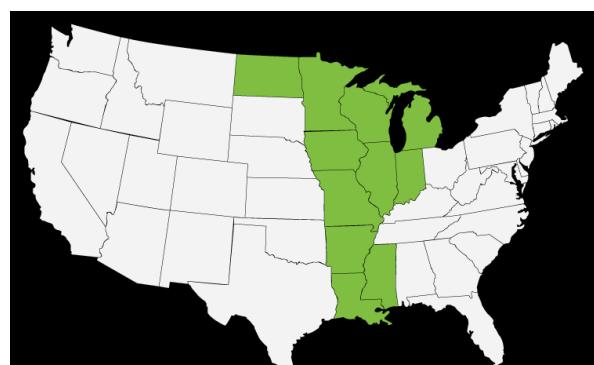
Entergy New Orleans has completed the installation of 2.5 MW of solar panels on a series of warehouse rooftops. The installation is part of the company's broader 5 MW commercial-scale rooftop solar pilot project. The project has the potential to be scaled up to 20 MW on existing buildings and properties around New Orleans. The company has set a commitment to include up to 100 MW of renewable energy resources in its generation mix.

## Decarbonizing Transportation will take Both Biofuels and Electric Vehicles

Transportation has become the largest source of carbon emissions, accounting for 27% compared to 25% coming from electricity generation, according to latest EPA statistics.



The Midcontinent Region



While electrification can play a big role for decarbonizing the transportation sector, low-carbon biofuels will play an important role in reducing emissions from the transportation sector over the next three decades even with widespread adoption of electric vehicles.

A new report, [A Roadmap To Decarbonization in the Midcontinent](#), suggests a continuing role for liquid fuel while the economy transitions to electric vehicles. The Midcontinent Region – **including Mississippi** – could lead the country and the world by creating an environment for biofuel innovation and by developing policy frameworks for its growth and adoption.

## Southeastern Solar Installers put up 242 MW of Distributed Solar in 2018

This year, [3.9 GW](#) of distributed generation is projected to come online nationwide—nearly as much as utility-scale generation—according to the Energy Information Administration (EIA). Installation data for nine Southeastern states can be found in the chart below:

State	Megawatts: MW of solar PV smaller than 1 MWac installed in the 12 months to 10/18	Population (millions)	Cumulative megawatts: MW of cumulative solar PV smaller than 1 MWac installed to date	Cumulative watts per capita: Watts of cumulative solar PV smaller than 1 MWac, per capita
North Carolina	22	10.3	135	13
South Carolina	78	5.0	189	38
Georgia	27	10.4	159	15
Florida	85	21	269	13
Alabama	2	4.9	5	1
Mississippi	1	3	7	2
Louisiana	17	4.7	137	29
Arkansas	8	3	14	5
Tennessee	2	6.7	56	8
<b>Total</b>	<b>242</b>			

Florida added 85 MW, edging out South Carolina at 78 MW. But South Carolina leads on a population-weighted basis, having widened its lead over Louisiana in second place. Alabama is still in last place. **Mississippi** is barely hanging on to next to last with only 7 MW cumulative DG solar installed.

## Report on State Actions on Distributed Solar

The N.C. Clean Energy Technology Center (NCCETC) has released its 2018 annual review of “[The 50 States of Solar](#).” The report provides insights on state regulatory and legislative discussions and actions on distributed solar policy. Forty-seven states took some sort of solar policy action. The greatest number of actions were residential fixed-charge increases, net metering policies and community solar policies. The **Mississippi PSC** authorized a study to determine the value of distributed solar in the state.

## Utilities Repurposing Land for Large-Scale Solar

Florida Power & Light proposes a [large solar project](#) on former citrus farms in rural Brevard County. Citrus greening has been devastating the state’s citrus industry since 2005. Once a tree is infected, there is no cure. The 75 MW solar farm will cover 485 acres and consist of 300,000 solar panels.

Georgia Power is moving forward with a [plan for solar](#) on a soon-to-be closed coal ash site at a power plant. The Hammond Plant could be taken out of service as soon as August 2019. Plans include for up to 10 MW of solar to cover the closed-in-place ash pits.

A solar farm on former phosphate land in Bartow, Florida is [nearing completion](#). Tampa Electric Co. has installed about 545,000 cadmium telluride panels on 422 acres. The solar farm generates up to 55.5 MW at peak production.

## **CLECO Plans to Add More Solar and Wind to its Generation Portfolio**

Louisiana-based Cleco Power has [announced](#) it will reduce the operation of the company's oldest coal-burning power plant and add a substantial amount of clean energy. CLECO said the most economic option would be to run the Dolet Hills coal-fired power plant only in the summer months and to acquire up to 1400 MW of renewable energy, comprising of up to 1000 MW of wind and 400 MW of solar. CLECO has a generation capacity of 3,310 MW and serves approximately 290,000 customers in Louisiana through its retail business and supplies wholesale power in Louisiana and Mississippi.

## **Kentucky's LG&E Seeking Renewable Energy Proposals**

Louisville Gas and Electric (LG&E) says there is growing interest and declining costs associated with renewable energy. The company is conducting a [formal review](#) and has issued a [request for proposals](#) from suppliers. Renewable energy could attract new energy-conscious businesses to the area. Proposals must be Kentucky-sourced renewable energy between 10 MW and 200 MW in size and ready to go by 2022.

## **Nevada's Rural Renewables Generate \$7.9 Billion in Economic Impact**

["The Economic Benefits of Nevada Rural Renewable Energy Facilities"](#) found that 29 rural, utility-scale renewable projects (solar, wind and geothermal) constructed in Nevada from 2006 to 2017 resulted in significant economic benefits to rural Nevada. Annually, these projects contribute \$187.5 million to the state economy. This includes ongoing wages of over \$61.3 million earned by 1,144 employees and local and state taxes of \$6 million per year. Much of the benefits is in areas of the state often overlooked.

## **National Issues**

### **Dispelling the Myths: Renewables on the Grid**

The International Solar Energy Society has developed a [series of infographics](#) to clarify commonly claimed shortcomings about renewable energy. The infographics introduces a myth regarding grid integration, then dispels the myth based on latest research findings and real-world successful experiences of the integration of renewables into existing electrical grids. Sharing knowledge on the real possibilities of renewable energy will help lead the way to their large-scale incorporation into the grid. Stakeholder are invited to utilize and share the infographics when discussing renewable energy.

### **U.S. Dept. of Energy Proposes to Roll Back Light Bulb Efficiency Standards**

This month, the DoE [announced plans](#) to rollback minimum efficiency standards for a range of common, every day light bulbs. Today's LED light bulbs meet the standards, but incandescent bulbs do not. Rolling back the standards would increase costs on consumers, increase energy demand, and increase the need for new electric generation facilities. Furthermore, the rollback would stifle lighting innovation.

### **Energy-Efficiency Programs Benefit Us All**

Power companies make money by selling electricity, so encouraging their customers to install energy-efficient lightbulbs and high-efficiency appliances through energy efficiency programs seems counter-intuitive. But [studies](#) have found that [utilities gain benefits](#) from these programs as well. Benefits

include: avoided cost of generating capacity; avoided ancillary services required to operate; value of reduced arrearage carry costs; and many other avoided costs.

## Making the Grid Smarter

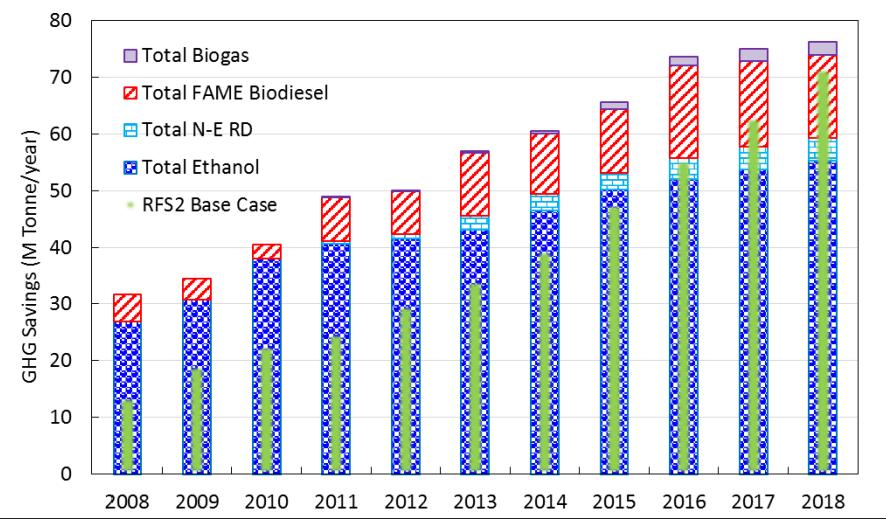
The Interstate Renewable Energy Council (IREC) published [Making the Grid Smarter: State Primer on Adopting the New IEEE Standard 1547™-2018 for Distributed Energy Resources](#). IREC's new resource will help states, regulators and other stakeholders navigate the related technical and policy issues to enable significantly higher penetrations of distributed energy resources (DERs) on the grid. The Standard requires DERs to be capable of providing specific grid supportive functionalities relating to voltage, frequency, communications and controls.

## RFS Power Coalition Formed

The RFS Power Coalition is a group of organizations dedicated to activating the renewable electricity pathway of the Renewable Fuel Standard (RFS). The Coalition is led by the [Biomass Power Association](#), [American Biogas Council](#) and [Energy Recovery Council](#), the trade associations that represent domestic biomass power producers. All three fuels – biomass, biogas and biogenic waste – qualify as renewable transportation fuels that should be included in the D3 cellulosic and D5 advanced fuel categories of the RFS. See <https://rfspower.com>. 25x'25 is a supporting partner of the Coalition.

## Report Confirms that Biofuels Reduce GHG Emissions

A [new report](#) completed by Life Cycle Associates finds biofuel use under the Renewable Fuel Standard has led to a reduction of 579 million metric tons of GHGs since 2007 when the law was implemented. Originally, the EPA estimated GHG reductions of 422 million metric ton. In addition to the GHG benefits of fuels blended with biofuels, the production of biofuels and its feedstocks have become much more efficient. See chart below outlining GHG Savings from the RFS2 Program.

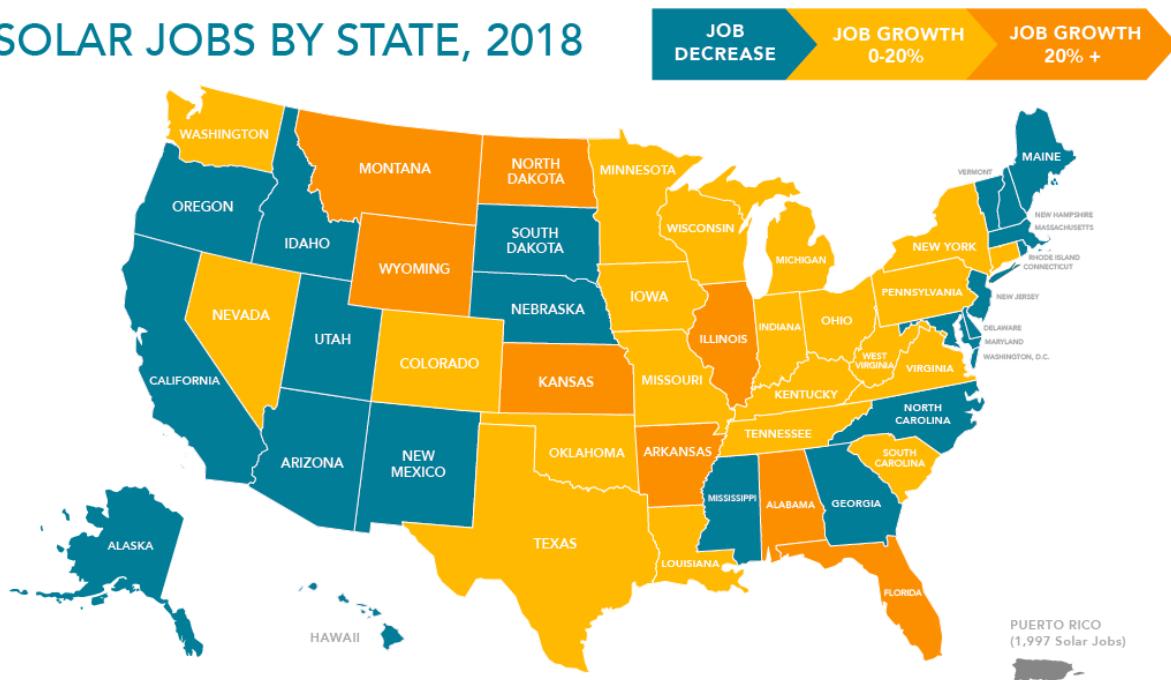


## National Solar Jobs Census Report Released

The Solar Foundation has released its [National Solar Jobs Census](#) for 2018, showing solar jobs in Mississippi [decreased](#) from 923 in 2017 to 770 in 2018, a decrease of 17%. That puts Mississippi 41<sup>st</sup> in the nation for solar jobs, and 46<sup>th</sup> if measured on a per capita basis. Our neighboring states of Alabama, Arkansas, Louisiana and Tennessee all had increases in solar jobs. Two by more than 20%!

Nationwide, solar job numbers fell 3.2% to 242,000 jobs as the administration's tariffs on solar panels took a toll, yet 29 states did see increases. The Solar Foundation projects a 7% increase in solar jobs in 2019. [See the infographic.](#)

## SOLAR JOBS BY STATE, 2018



In spite of shrinking employment and the impact of tariffs, solar installations nationally rose 8% in 2018, according to Bloomberg New Energy Finance (BNEF) in its [Sustainable Energy in America Factbook](#).

More installed capacity by fewer workers may reflect higher productivity on the part of the industry, as installers learn to work better and faster, and as communities support them with streamlined permitting and public education.

The growth in utility-scale solar is surely a factor also. Rooftop residential and commercial solar is labor-intensive, while large, ground-mounted arrays allow significant economies of scale. Statistics from the Solar Energy Industries Association (SEIA) [show](#) utility-scale solar has been driving much of the increase in solar installations over the past several years.