

# Mississippi Renewable Energy and Energy Efficiency Update

## Mississippi Issues

### Energy Month Proclamation

Governor Phil Bryant proclaimed October 2018 as **Energy Awareness Month**. In his proclamation, he recognized the economic benefits of reliable, abundant and affordable energy and the programs the state has to encourage renewable energy and energy efficiency implementation. See below:

STATE OF MISSISSIPPI

Office of the Governor



#### PROCLAMATION

WHEREAS, reliable, abundant and affordable energy is critical to Mississippi's prosperity and quality of life, and energy resources have laid the foundation for our nation's economic security and prosperity; and

WHEREAS, the production and consumption of energy affects our everyday activities and natural resources; and

WHEREAS, Mississippi provides innovative statewide programs encouraging energy infrastructure development, energy efficiency and renewable energy within state government, throughout its local governments and among its citizens, businesses, industries, and educational institutions; and

WHEREAS, energy sector development can offer employment and economic opportunities, and innovation in energy technology will strengthen our economy; and

WHEREAS, all Mississippians can continue to contribute to the bounty and efficiency of Mississippi by becoming energy aware and energy efficient in their homes and in their work and recreation areas; and

WHEREAS, the U.S. Department of Energy has designated October as National Energy Awareness Month; and

WHEREAS, the Mississippi Development Authority's Energy and Natural Resources Division has designated this year's theme to be "Energy Dominance:" and

NOW, THEREFORE, I, Phil Bryant, Governor of the State of Mississippi, do hereby proclaim October 2018 as

#### ENERGY AWARENESS MONTH

in the State of Mississippi and urge all citizens to acknowledge and honor this observance.



IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Mississippi to be affixed.

DONE in the City of Jackson, on the 17<sup>th</sup> day of September, in the year of our Lord, two thousand and eighteen, and of the Independence of the United States of America, the two hundred and forty-third.

PHIL BRYANT  
GOVERNOR

## MDA Accepting Applications for Industrial Energy Efficiency Program Funds

The Mississippi Development Authority's Energy and Natural Resources Division is now accepting applications for the 2018 Mississippi Industrial Energy Efficiency Program. MIEEP is designed to assist Mississippi companies with making energy efficiency upgrades to their facilities to reduce energy consumption and operating costs. Entities eligible to apply include private for-profit organizations, businesses, sole proprietorships and partnerships with operations in Mississippi. The deadline to apply is Dec. 7, 2018. To view MIEEP guidelines and apply for funding, please visit <https://bit.ly/2EEEb6R>. For more information, please contact Gayle Sims at (601) 359-3449 or [energysmartms@mississippi.org](mailto:energysmartms@mississippi.org).

## Energy Awareness Day Celebrated at Ag Museum

[Energy Awareness Day 2018](#) brought over 900 students to the MS Ag and Forestry Museum for an interactive day for learning about energy, advanced technologies, and natural resource related issues. Despite the hot and humid conditions, students and their teachers and circulated through nearly two dozen activity stations. I had the pleasure to talk to participants about various transportation drivetrain technologies, such as hybrid, plug-in hybrid, and battery electric vehicles. I am pictured with MDOT's hybrid Ford SUV.



## 2018 Mississippi Energy Report

At the recent Southern States Energy Board meeting, Governor Bryant provided [preliminary data](#) from the Mississippi Energy Report being developed by the MSU National Strategic Planning & Analysis Research Center (NSPARC). The report provides an assessment of the economic impact of Mississippi's energy sector.

## Enhancing Sustainability in the Food and Beverage Industry

Last month, the Mississippi Department of Environmental Quality and the Mississippi Manufactures Association-Manufacturing Extension Partnership hosted a workshop entitled "ENHANCING SUSTAINABILITY IN THE FOOD AND BEVERAGE INDUSTRY." The presentations from the workshop are now available online at <https://www.mdeq.ms.gov/land/waste-division/enhance/training/enhancing-sustainability-in-the-food-and-beverage-industry/>.

## Port of Gulfport is a “Green Marine” Certified Port

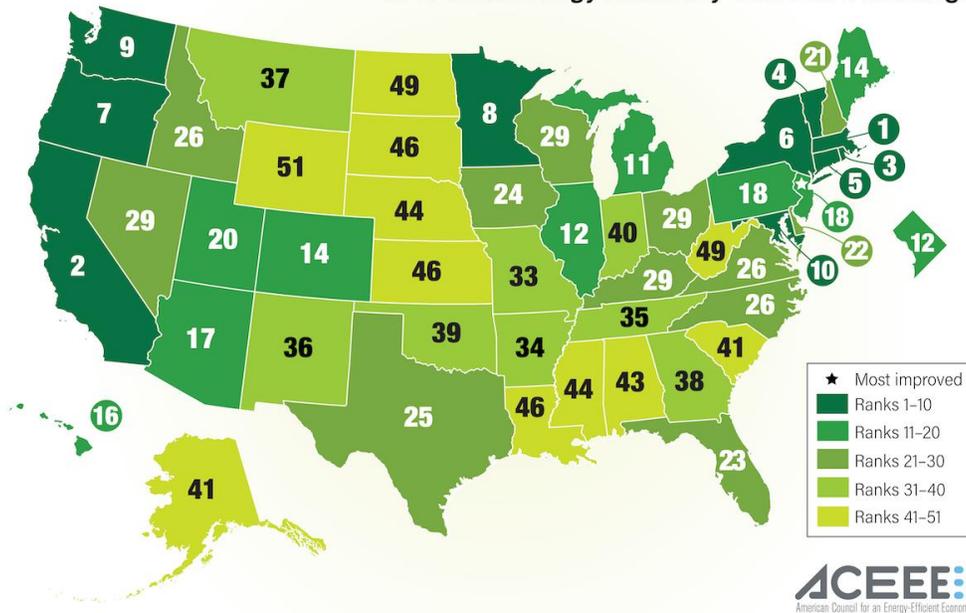
Since 2014, the Port of Gulfport has officially been a [Green Marine certified port](#), which requires a rigorous annual review that looks at all aspects of the port's impact on the environment. The port has replaced its diesel-powered cranes with three electric gantry cranes, encouraged use of low-emission trucks at the port and added LED lighting around the port.

## Mississippi Gains Two Spots in ACEEE 2018 State Energy Efficiency Scorecard

The 12<sup>th</sup> annual [State Energy Efficiency Scorecard](#) from the American Council for an Energy-Efficient Economy (ACEEE), released on October 4, ranks states based on 32 metrics in six areas: utilities, buildings, transportation, state government, combined heat and power, and appliance standards.

**Mississippi** gained 0.5 points which helped the state move from #46 in 2017 to #44 in 2018. The 0.5 gain was attributed to improved transportation efficiency. It was just a few years ago that Mississippi was #51 – dead last in the rankings. Utilities in the U.S. spent more than \$7.9 billion in 2017 for efficiency programs nationwide and saved 27.3 million MWh of electricity. So, how does Mississippi stack up again other states in the Southeast? Check out the [Southeast States Background](#).

2018 State Energy Efficiency Scorecard Rankings



## USM Marine Education Center Garners Excellence in Sustainability Honors

The [USM Marine Education Center](#) is located in Ocean Springs and serves as the outreach arm of the University's Gulf Coast Research Laboratory. The center connects the public with coastal and marine science through several programs, including those that allow school and community groups to tour coastal habitats and gain a deeper understanding of marine plants and animals. Check out this video to learn about the Center's design features: <https://youtu.be/2UpiGtTtBfQ?list=PL6BEA221F1CB655D6>. The design team is [Unabridged Architecture of Bay Saint Louis](#). The award was presented at the AIA-MS [Mississippi Celebrates Architecture](#) Awards Ceremony.

## MSU Celebrates Green Week

Mississippi State University is participating in Green Week for the second year in a row. Several organizations gathered for the [Green Week Organization Fair](#) on the Drill Field to share information on recycling, energy efficiency, community gardening and other sustainable practices.

## TVA to Hold Listen Session and Board Meeting in Tupelo

The TVA Board of Director's next public listening session will take place on Nov. 13, 2018, in Tupelo, MS (Time TBA). Any member of the public may attend the listening session and speak to the Board. However, speakers must pre-register online by 5 p.m. ET on Nov. 12 to speak. Learn more at [TVA Pilot Listening Session](#).



## Review of MPSC Special Meeting – September 25

On September 24, the MPSC posted on its website a notice of a "[Special Meeting](#)" to take place on September 25 at the Woolfolk Office Building at 2 pm. Because of the much abbreviated public notice period, I did not learn of the meeting and missed it. I was told that at least one item on the agenda was time sensitive and could not wait to be included in the MPSC Regular Meeting agenda on October 2.

Items of interest to energy and consumer stakeholders:

**Docket No. 2014-UN-132, Entergy Mississippi, Notice of Intent to Modernize Rates to Support Economic Development, Power Procurement, and Continued Investment (Schedule ATA-3):** The [Schedule ATA](#) (Ad valorem Tax Adjustment Factor) allows Entergy Mississippi to collect the incremental difference between the projected ad valorem tax expense to be paid during the upcoming 12-month period and the level currently reflected in base rates, plus a true-up for the under recovery of ad valorem tax expense in the prior twelve months. The estimated increase on the monthly bill of a typical residential customer using 1,000 kWh per month will be an increase of \$1.02 per month beginning with bills issued on or after October 1, 2018. The MPSC [approved](#) the new rate.

**Docket No. 2018-UA-39, Entergy Mississippi, Application to Change Utility Operations to a Limited Liability Company:** On March 23, 2018, Entergy Mississippi filed its [Application](#) seeking Commission authority for EMI to undertake an internal restructuring ("Restructuring") that would result in the business and operations of EMI being conducted by Entergy Mississippi, LLC ("EML"), which would be a Texas limited liability company and a subsidiary of an existing holding company, Entergy Utility Holding Company, LLC ("EUH") that is a subsidiary of EMI's parent company, Entergy Corporation. The Company's **confidential** Joint Stipulation with the Staff states that if the Commission approves the Restructuring by September 2018 and the Restructuring closes on or before December 1, 2019, EMI would provide guaranteed customer bill credits of \$27 million over six years, consisting of annual payments of \$4.5 million each year (2019-2024). The Commission finds that the proposed Restructuring is consistent with the public interest, waived the Procedural Rules, and [approved the application](#).

**Docket No. 2018-UN-118, Entergy Mississippi, Notice of a Routine Change in the Standard Rate for Purchases of Electric Energy and Qualifying Cogeneration and Small Power Production Facilities with Design Capacity of 100 Kilowatts or Less:** In June, Entergy filed a [proposed Schedule QF-18 rate](#) that apply to qualifying cogeneration and small power production facilities. The Commission finds that the Schedule QF-18 is just, reasonable, and consistent with applicable law and the rules of this Commission, and it should be allowed and [ordered to go into effect](#). The payment per kWhr delivered energy increased from 2.880 cents/kWhr to 3.232 cents/kWhr.

**Docket No. 2018-AD-141, Final Order Requiring Certain Utilities to Annually Report Workforce**

**Diversity Information:** All rate-regulated, investor-owned public utilities with at least 100,000 customers in its certificated area and/or with greater than fifty (50) employees in the State of Mississippi shall file with the Commission a separate and distinct annual report containing certain workforce diversity information and recruiting/educational outreach event attendance data on an annual basis beginning May 1, 2019. The MPSC approved the [Final Order](#).

**Review of MPSC Regular Meeting and Docket Call – October 2**

The MPSC met on October 2, 2018, at 10 am in the MPSC Hearing Room ([agenda](#)). Items of interest to energy and consumer stakeholders:

**Docket No. 2018-UA-34, MS Power Co., Special Contract Between MS Power Co. and Chevron**

**Products Co.:** MS Power Co. (MPCo) provides electric and steam service to Chevron via an on-site cogeneration unit. Chevron is MPCo's largest retail customer. MPCo and Chevron negotiated a new 20-year Special Contract, including lease of lands for substations, etc. The cogeneration facility consists of 5 units that provide a cumulative 130 MWs. The special contract will cover the costs of service as well as the costs of replacing Cogen Unit 3 and Unit 4 Heat Recovery Steam Generators. These HRSGs were put in service in 1971. The project will cost about \$52 million. The Special Contract terms and conditions provide that such costs are to be the responsibility of Chevron. MPCo [testified](#) that the rates of other customers shall not be impacted by this project. MPSC [approved](#) the Special Contract.

**Docket No. 2018-UA-33, MS Power Co.: Application of CPCN for Generating and Related Facilities:**

The MPSC held a hearing on the application for the Petition for Facility Certificate. No objections or protests to the Facilities Certificate authorizing replacement projects for MPCo Plant Chevron Co-generation Unit 3 and Unit 4 Heat Recovery Steam Generators, as well as well as for additional work to update and upgrade certain other employee based facilities located at Plant Chevron. The MPSC [approved](#) the Facility Certificate.

**Docket No. 2018-UA-95: Atmos Energy** was given [approval to extend and expand service](#) in Desoto County. Docket No. 2018-UA-120: Atmos Energy was given [approval](#) to take over control of natural gas services in the town of Shuqualak and was granted a CPCN.

**Review of MPSC Open Meeting – October 23**

The MPSC met on October 23, 2018, at 10 am in the MPSC Hearing Room ([agenda](#)). Items of interest to energy and consumer stakeholders:

**Docket No. 2005-UN-503: Atmos Energy** filed and the MPSC [approved](#) Atmos' Stable/Rate Annual Evaluation for the 12 Months Ending March 31, 2018, and the Joint Stipulation between MPUS and Atmos.

**Docket No. 2015-UN-049: Atmos Energy** filed its proposed System Integrity Rider ("SIR") Rate Schedules in support of its Capital Budget for 2019. The MPSC [approved](#) the new rate schedule via a Joint Stipulation between MPUS and Atmos that will result in a projected monthly rate increase to a typical residential customer of approximately \$1.49.

[Next meeting](#) of the MPSC will take place on November 6, 2018, at 10 am in the Woolfolk Building.

## **Mississippi State Univ. Chosen to Participate in EcoCAR Mobility Challenge**

MSU is one of only 12 universities selected to participate in the [EcoCAR Mobility Challenge](#), the latest DOE-sponsored Advanced Vehicle Technology Competition (AVTC) using the 2019 [Chevrolet Blazer](#) as the vehicle platform selected for the competition. Participating teams will apply advanced propulsion systems, electrification, SAE Level 2 automation, and vehicle connectivity to improve the energy efficiency of a 2019 Chevrolet Blazer - all while balancing factors such as emissions, safety, utility, and consumer acceptability. MSU has a strong record of success in past EcoCAR competitions.

## **Study to Quantify the Benefits of Distributed Generation**

Earlier this summer, Sierra Club, 25x'25 and GSREIA submitted a [letter to the Commissioners](#) and filed a [motion to defer](#) the study until the 5-year review of the Net Metering Rule so that the market could develop further and until more information on distributed generation impacts is available. The Commission has informed petitioners that the motion will not be acted on and issues regarding the Distributed Generation Benefits Study will be address when the study results are revealed in February.

## **Fallout from the New Tax on Electric and Hybrid Vehicles**

Electric and hybrid vehicle owners got a [surprise from the MS Department of Revenue](#) recently when they received a notice informing them that a new annual tax (\$150 for electric and \$75 for hybrids) would be tacked on their tag fee. The tax, which will increase annually with inflation, is supposed to help contribute to the costs of road and bridge maintenance. If an electric vehicle was driven only 5,000 a year, it still pays \$150. However, a gasoline-powered vehicle that travels 12,000 miles a year and gets 25 miles per gallon would only pay \$88.32 in taxes that contribute to the costs of road and bridge maintenance. Remember, fuels taxed do not adjust with inflation. At least one state senator has said that he will introduce a [bill to repeal the tax](#) on electric and hybrid vehicles.

## **Seraphim: Are they Growing or Going?**

Recently, Seraphim Solar Manufacturing USA shut down its solar module factory in Jackson, Mississippi, leading some to conclude that the company is going out of business. Company officials did indeed say operations have stopped and some employees were laid off. However, the company says they are preparing to install new systems to more than triple its manufacturing capacity to 500 MW annually. Check out the recent [PV Magazine article about Seraphim](#). We will know by the end of the year.....

## **Entergy Mississippi Lawsuit to Begin on Nov. 5**

Attorney General Jim Hood's lawsuit claims Entergy overcharged Mississippi customers up to \$1.1 billion between 1998 and 2009, arguing the company had a duty to use less expensive power for customers. According to Hood, Entergy was buying cheap electricity from independent power producers and selling it on the open market for bigger profits while selling Entergy customers (who have no other choice from which to purchase power) higher priced electricity from Entergy-owned generators. U.S. District Judge Carlton Reeves ruled that he won't seat a jury and will decide the case from the bench.

## **Change of Date: MS Energy Coordinators Association Conference – Feb. 7-8**

The Mississippi Energy Coordinators Association (MECA) has announced a change in its date for their [Annual Conference](#). The event will now be held at the IP Casino & Resort in Biloxi on February 7-8, 2019. Go to <http://msenergycoordinators.org/> to [register](#) and for additional details.

## **Regional Issues**

### **Entergy N.O.'s Paid Actor Scandal Investigation Finds ENO Knew Of Scheme**

The New Orleans City Council hired an outside legal team to investigate claims that Entergy New Orleans used paid actors in City Council meetings and hearings to sway support for a new power plant in New Orleans East. Entergy N.O. initially insisted that they knew nothing about the actors and that it was a contract firm's decision to hire a company called "Crowds on Demand," which paid actors to voice support for the plant project at public meetings. The [62-page report on the investigation](#) outlines why [Entergy executives decided to drum up false support](#) for the power station, and how Entergy N.O. paid actors to do it. The investigation found that Entergy N.O. executives were involved in the decision making process and knew or should have known about these actions.

### **Wind Energy in the Southern States – SLC Report**

This Southern Legislative Conference [report](#) assesses challenges to the wind energy industry, particularly as they relate to: military installations, avian impacts, and cultural perceptions. Earlier reports in this [series](#) explored the benefits of wind energy in the region and provided case studies in Texas, Oklahoma and Virginia. Wind energy production in the United States continues to grow, heralding expanded transmission capacity, lower energy prices and job growth.

### **New Go-To Guide for Residential Installations**

SEIA has released an updated [Installation Best Practices Guide for Residential Portfolios](#). The white paper, developed by members of SEIA's Solar Quality Assurance Working Group, provides recommended best practices on everything from contractor qualifications to the design and actual installation of a solar photovoltaic (PV) system.

### **Smithfield Foods Announces Landmark Investment to Reduce GHG Emissions**

Smithfield Foods, Inc. has [announced](#) the nationwide expansion of [Smithfield Renewables](#). With this, Smithfield is setting the ambitious goal to implement "manure-to-energy" projects across 90 percent of Smithfield's hog finishing spaces in North Carolina and Utah, and nearly all Smithfield's hog finishing spaces in Missouri over the next ten years. Captured biogas will be converted to pipeline-quality renewable natural gas.

### **Energy Storage Investments Planned for the Carolinas**

Duke Energy Corp [plans to build \\$500 million of battery storage projects](#), representing about 300 MW of capacity, in North and South Carolina over the next 15 years. Making use of battery storage has benefits for not only for storing and dispatching energy, but for other customer and system benefits such as system balancing and deferral of traditional grid upgrades – especially when serving remote locations.

### **TVA Lags Behind Southeast in Solar Growth**

According to critics, TVA, the nation's largest federal utility, has [slowed investments in renewable energy infrastructure](#) in an attempt to preserve its legacy fossil generation fleet. It's three solar programs, Green Power Providers, Distributed Solar Solutions, and Standard Rate Offer, have been drastically cut back. The only states that have installed less solar than Tennessee so far this year are Wyoming, Montana, Kentucky and **Mississippi**.

### **Virginia Governor Roles out 2018 Virginia Energy Plan**

The [2018 Virginia Energy Plan](#), which outlines the state's energy policy over the next 10 years, [sets targets for renewable energy generation, energy efficiency and electric vehicles](#). It also calls for a comprehensive grid modernisation planning process. Among the report's recommendations: Intall at least 3,000 megawatts of solar and offshore wind energy by 2022; develop 2,000 megawatts of offshore wind energy by 2028; expand the state's net metering, power purchase agreement and community solar programs; double the state's renewable energy target to 16%; expand state-sponsored efficiency programs and financing; 20% energy efficiency target for state agencies; increase annual investments by utilities in energy-efficiency programs; adopt Advanced Clean Cars and enegy storage programs; make the state's electric grid more resilient.

## North Carolina Gov Signs Executive Order on GHG Reductions and Clean Energy

North Carolina Democratic Gov. Roy Cooper signed [an executive order](#) on Oct. 29 aligning the state with the goals of the Paris climate agreement of reducing statewide greenhouse gas emissions to 40 percent below 2005 levels by 2025. The order also calls for an increase to at least 80,000 in zero-emissions vehicles and would reduce energy consumption per square foot in state-owned buildings by at least 40 percent from 2002-03 levels.

## Solar Power is Saving these Arkansas Customers Money

Tillar and Company is a diversified row crop operation that dries its grains using electric fans. So to reduce electricity costs, Farm Manager A.J. Hood decided to have [solar panels installed](#) at the farm. Hood said, "We started by looking at the numbers and the more we looked, the more we realized that this is something economically feasible for growers in Arkansas." Hood says the solar installation takes up less than two acres of land. And yet it now offsets 100% of the grain storage facility's power. He expects that will [save the farm 30 to 35 thousand dollars a year](#). Next step is to assess the solar needed to offset the energy used by the farm's irrigation wells and shop facilities. Mr. Hood was a finalist for the *Ron Bell Advanced Energy Leadership Award* presented by the Arkansas Advanced Energy Association.



Batesville School District implemented a comprehensive energy efficiency and renewable energy project. Rather than looking at this as a 'green' project, the district looked at the project as a long-term investment in the school and as a way to sustain economic stability. They cut their annual utility bill from \$1 million annually to less than \$500K.

**"Our focus is kids first,"** said Batesville (Arkansas) School District superintendent Dr. Michael Hester. **"To do that, we need to be able to retain teachers."** Dr. Hester initiated the state's largest energy

**waste reduction initiative and the state's first school district solar project. The energy cost savings have allowed the district to increase teachers' salaries.**

The solar panels cover walkways and the gym. The walkways are not rainproof. Water drops between the panels. This was intentional as the district wanted people see the backside of the panels so that folks could appreciate the technology and see the scope of the project and know how the district is achieving its goals.

South Arkansas Telephone Company in Hampton is the nation's first and only 100 percent solar-powered phone company. "We took a variable expense and it is now fixed. What other commodity can we do that with?" stated Mark Lundy, director of SATCO. With the savings, they are now working with their local electric cooperative to offer high-speed internet services to their customers. SATCO evaluated the project for nine months before deciding to go forward. From signing the contract to going online took less than 4 months.



## **Republican Leaders Stump for Solar in South Carolina**

A number of GOP elected officials, along with representatives from solar energy companies, gathered for a [forum](#) in Columbia. Among those on the panel were Republican state Rep. Nathan Ballentine, Republican state Sen. Tom Davis and former state Republican Party chairman Matt Moore, who now heads the Palmetto Conservative Solar Coalition. Also, on hand was Gov. Henry McMaster who presented a gubernatorial proclamation in support of renewable energy.

## **Judge Could Rule Base Load Review Act as Unconstitutional in South Carolina**

A South Carolina judge is expected to overturn the controversial Base Load Review Act that put SCG&E electricity customers on the hook to the tune of nearly \$5 billion for a failed nuclear project. The decision could also trigger \$2 billion in refunds for ratepayers. The Base Load Review Act (or variations of it) were passed in states all across the Southeast. The law was used to advance the Kemper project.

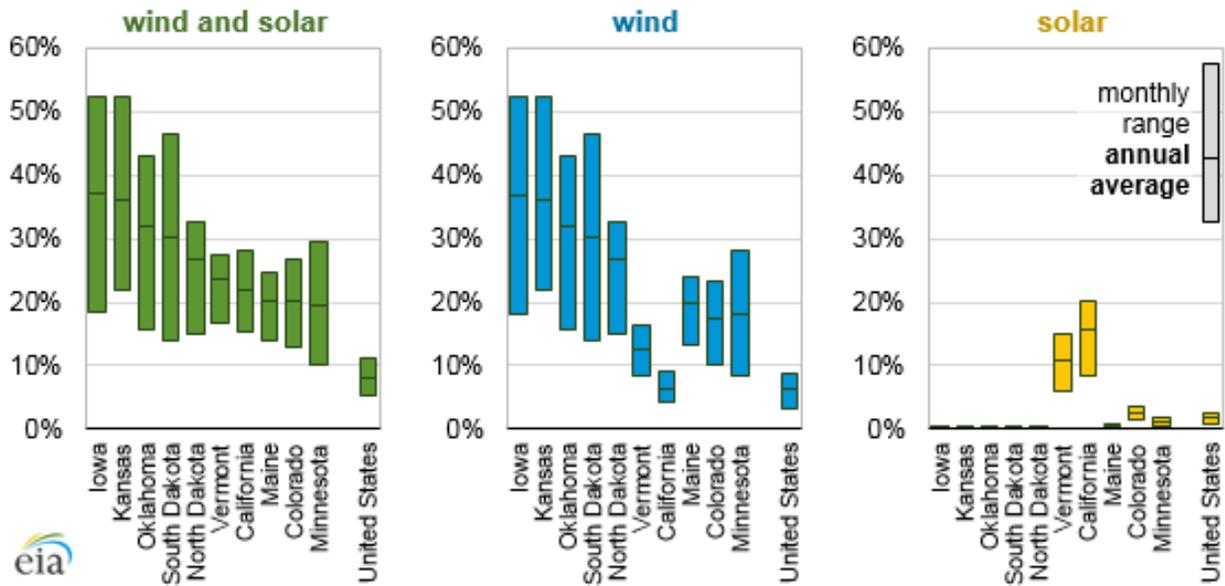
## Gainesville, FL Leaders Vote to Go 100% Renewable

Gainesville, Florida, officials [unanimously pass](#) a resolution to power the city with 100 percent renewable energy by 2045. Gainesville’s share of renewable energy use is already at 27% through solar and biomass resources.

## Ten States Get 20% of Electricity from Wind and Solar

According to the EIA, wind and solar generation — which includes small-scale solar PV — reached or exceeded 20% of total electric generation in 10 US states in 2017 — Iowa, Kansas, Oklahoma, South Dakota, North Dakota, Vermont, California, Maine, Colorado, and Minnesota. Iowa boasts annual wind and solar generation of 37%.

Percent of in-state electricity generated from wind and solar (2017)



## America's Top Cities for Clean Energy Jobs

The Top 50 metro areas for clean jobs now employ 1.8 million workers in clean energy technologies, accounting for more than one out of every two clean energy jobs in the country – which alone outnumbers the fossil fuel industry by around 700,000. All Top 50 metros employ more than 10,000 clean energy workers and account for 58% of all clean energy jobs. Learn more at the [Clean Jobs Cities Top 50](#) infographic.

## CLEAN JOBS CITIES | AMERICA'S TOP 50 CLEAN ENERGY JOBS ENGINES

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### National Issues

#### Energy Efficiency Challenges Ahead

Current federal energy efficiency standards are expected to save consumers over \$2.5 trillion in energy bills by 2040. Despite the many regulatory rollbacks the Administration had proposed, energy efficiency programs have been spared for the most part. But, unfortunately, that is soon expected to change. How resilient are those policies and programs? [ACEEE takes a look at the challenges facing EE programs.](#)

#### ACEEE Rural Energy Conference a Success

On October 22, scores of representatives of business, academia, government, utilities, and NGOs came together in Atlanta for the [Rural Energy Conference](#) to discuss how energy efficiency and clean energy technologies and programs can help rural America leverage its unique characteristics for economic growth and social equity. I had the privilege to moderate a [panel](#) on how commercial & industrial energy efficiency programs strengthen business by reducing costs and improving competitiveness.

#### Farm Bill Expires; Negotiations Continue

On top of a tense mid-term election, retaliatory tariffs on farm exports, and record low prices, the Farm Bill expired on Sept. 30 causing more uncertainty in farm country. The Conference Committee continues to try to work out the differences between the [Senate](#) version of the farm bill, [Agricultural Improvement Act of 2018](#), and the [House](#) version, [Agriculture and Nutrition Act of 2018](#) (H.R. 2). An extension of current law will be impossible before the November elections, leaving Congress to having to answer to rural voters come Election Day.

The House bill eliminates the Energy Title while shifting most bioenergy programs to the Rural Development Title. The Senate version maintains mandatory funding to Farm Bill Energy Title programs.

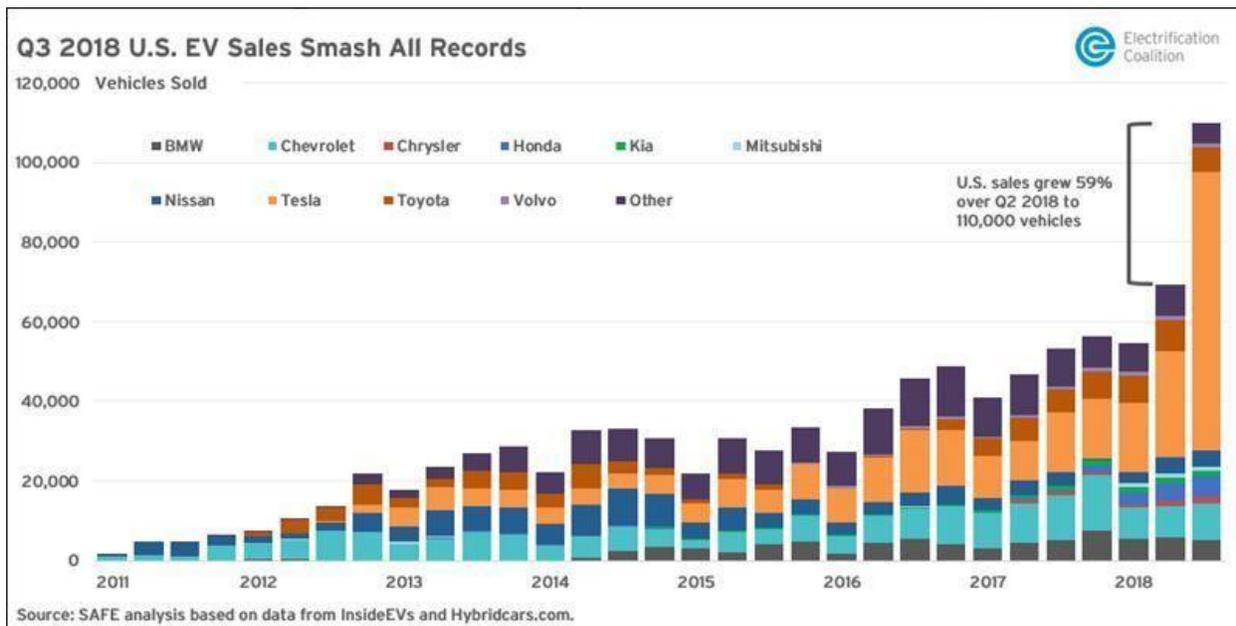
Although the big issue is the SNAP work requirements proposal, challenges remain in conservation and commodity programs.

## Bioenergy – The Overlooked Giant of Renewables

According to the International Energy Agency’s [Market Analysis and Forecast to 2023](#), modern bioenergy is the “overlooked giant” of the renewable energy field. According to Dr. Fatih Birol, the IEA’s Executive Director. “Its share in the world’s total renewables consumption is about 50% today, in other words as much as hydro, wind, solar and all other renewables combined. We expect modern bioenergy will continue to lead the field, and has huge prospects for further growth. But the right policies and rigorous sustainability regulations will be essential to meet its full potential.” Bioenergy is a special focus of this year’s report. See the [Executive Summary](#) and [slide deck](#) which contains helpful takeaways and conclusions.

## U.S. Near 1 Million in Total Electric Vehicles Sold

As of this month, the U.S. was on track to exceed one million in electric vehicles purchased by consumers. With the rollout of Tesla’s latest vehicle and the introduction of other models by manufacturers, interest in EVs continues to grow – especially as the price of fuel goes up as well.



## Sustainable Options for Thermal Energy

The Center for Climate and Energy Solutions (C2ES) published a [series of six case studies](#) illustrating renewable thermal technologies used by a consumer goods production plant using geothermal, a corn and starches facility using solid biomass, a cosmetics company using renewable natural gas from a landfill, an automotive assembly plant using waste-to-steam, and two wastewater treatment plants using biogas, one for a food processing facility and the other for a major city.

## National Renewable Energy Production and Consumption Continues to Increase

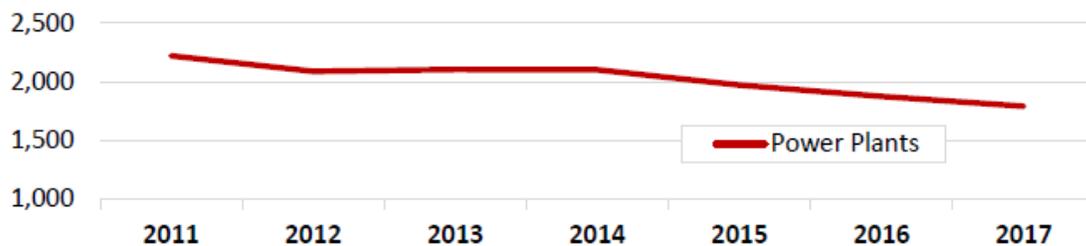
The [U.S. Energy Information Administration’s \(EIA\)](#) latest “Monthly Energy Review” (with summary statistics for the first six months of 2018) reveals that output by non-hydro renewables increased by 7.04% to 4.530 quads (quadrillion Btu) compared to the first half of 2017 (4.232 quads). Solar energy

accounted for the largest percentage increase (25.4%), followed by wind (11.2%), biofuels and biomass (2.4% each), and geothermal (1.0%). As a share of total domestic production from all energy sources, non-hydro renewables accounted for nearly a tenth (9.80%). Including hydropower, renewable energy sources accounted for 13.05% of domestic energy production and 11.76% of consumption. While actual output and use of renewables have increased, renewables share of total energy output actually decreased (as a percentage of total energy) due to a reduction in hydropower and a jump in natural gas.

### National Direct GHG Emissions Drop from 2016 to 2017

For 2017, 7,544 direct emitters reported 2.91 billion metric tons CO<sub>2</sub>e were emitted. The largest emitting sector was the Power Plant Sector with 1.8 billion metric tons CO<sub>2</sub>e, followed by the Petroleum and Natural Gas Systems Sector with 284 million metric tons (MMT) CO<sub>2</sub>e and the Chemicals Sector with 184 MMT CO<sub>2</sub>e (non-fluorinated and fluorinated chemicals combined). For the reporting period, emissions decreased 2.6%. This decline is primarily attributed to the decline in reported emissions from power plants. See the latest [EPA Greenhouse Gas Reporting Program](#) report.

Figure 3: Trends in Direct GHG Emissions (2011–2017)<sup>a,b,c</sup>



### Energy Efficiency Takes Strain off of Grid

In a [new report](#), ACEEE shows that energy efficiency is often an effective but underutilized way to ensure grid reliability and prevent interruptions in electric service. Energy efficiency has clear reliability benefits, but those benefits are generally not adequately included and quantified in grid planning and decision-making. As a result, there are [too few investments in efficiency measures](#), and higher grid costs. Energy efficiency is an especially valuable resource to decrease system peak demands and grid loads.