



# ENERGY POLICY UPDATE

June 30, 2014

The Energy Policy Update Electronic Newsletter is published by the Arizona Governor's Office Of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environment-related publications that are reviewed by Community Outreach Personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email [Gloria Castro](mailto:Gloria.Castro@az.gov).

## UPCOMING WEBINARS

- [ENERGY STAR Webinars](#)
- [U.S. Dept. of Energy Tribal Renewable Energy Webinar Series for 2014](#)

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The Arizona Republic now has limited access. As such, links may or may not work.

## ARIZONA-RELATED

### [Energy EUL Lucrative for Luke AFB, APS](#)

[Fierce Energy, June 20] Luke Air Force Base (AFB) and Arizona's largest electric utility provider, Arizona Public Service (APS), are partnering on a new solar power plant to be built on 100 acres of land located on the AFB. APS is leasing the land from Luke AFB as part of an energy Enhanced Use Lease (EUL) -- a partnership between the Air Force and public entities to encourage the development of renewable energy, helping the Air Force to save money while meeting congressionally established Air Force goals. APS will lease the land from Luke AFB for \$6 million over 30 years. The 10 MW facility is part of the APS AZ Sun Program, which invests in photovoltaic power plants across Arizona. The project at Luke AFB will become the ninth AZ Sun project either already online or in some stage of development -- totaling 170 MW of solar energy for Arizona. The AZ Sun Program, allows APS to invest in the development of solar photovoltaic power plants across Arizona and partner with third-party developers and equipment providers to design and construct the facilities. Project financing is provided by APS.

### [Failed Emissions Test? Try a Free Gas Cap](#)

[Arizona Daily Star, June 23] PHOENIX — The state of Arizona is giving away free gas caps. Not to just anyone. The freebie is limited to those who fail their vehicle emissions test due to a faulty gas cap. And the tab is actually being picked up by the company that has the contract with the state to do vehicle emission checks, not coming directly from taxpayers pockets. The new policy, which kicks in Tuesday, will save thousands of Arizonans not only from having to shell out for a new gas cap but also having to make two trips to get their cars and trucks inspected. Eric Massey, director of the air quality division at the Department of Environmental Quality, said it makes financial sense, too. The biennial emission checks are required for motorists who live in or travel daily into the state's two metropolitan areas. For older vehicles, that means actually testing what comes out of the tailpipe. Newer cars have computers that monitor performance — and a spot under the dashboard where workers at testing stations can plug in and determine if the vehicle is functioning properly. But it also involves testing whether the gas cap is sealing tight.

### [NASA To Launch Gilbert-Built Satellite](#)

[Arizona Republic, June 26] A \$470 million NASA satellite built by Orbital Sciences Corp. in Gilbert promises to give scientists their clearest picture yet of Earth's warming atmosphere and provide a powerful new tool for climate-change science after its much-anticipated launch next week. From its perch 438 miles above Earth's surface, the Orbiting Carbon Observatory-2 will be NASA's first satellite with the sole purpose of measuring atmospheric levels of carbon dioxide, a greenhouse

gas linked to global warming. During its two-year mission, the satellite will provide more-accurate readings of CO<sub>2</sub> levels on global and regional scales, allowing scientists to better understand how natural processes and human activity affect concentrations of the greenhouse gas. Using space-based measurements, scientists can look for carbon sources, like cities where CO<sub>2</sub> is produced in mass quantities. They also expect to find carbon "sinks," areas like the Amazon rainforest where dense vegetation sucks carbon dioxide from the air to produce oxygen. OCO-2 will give the world "something exceptionally valuable, something that was never possible before," Arizona State University professor and scientist Soe Myint told *The Arizona Republic*. Global leaders will be able to see which countries, states and even cities emit the most CO<sub>2</sub>, he said.

#### [Pima County, Kinder Morgan Agree on Pipeline Mitigation](#)

[Arizona Daily Star, June 18] TUCSON – Pima County finally reached an agreement with Kinder Morgan to mitigate any long-term environmental damage caused by the 60-mile pipeline the company wants to build from Tucson to Sasabe. Kinder Morgan will monitor the pipeline and surrounding area for 20 years and give the county \$4 million to offset environmental degradation and mitigate the loss of any riparian habitat in the Altar Valley, where the company's Sierrita pipeline will carry natural gas to Mexico. The county Board of Supervisors approved the mitigation measure unanimously Tuesday, although some members were reluctant. "I don't have a lot of faith in all of this coming to fruition," said Supervisor Richard Elías. "I don't feel too good about this." The agreement calls for Kinder Morgan to pay a lump sum, in-lieu fee of \$3 million for riparian losses in the area and to give another \$1 million so the county could buy land to offset degradation to the area near the pipeline and minimize any adverse long-term impacts. Kinder Morgan will also have to document revegetation and topography, monitor erosion in washes and elsewhere along the corridor, and monitor the impacts of illegal trafficking and drug smuggling in the area. In addition, the company agreed to a request by the Tohono O'odham Nation to pay for an archaeologist to check the area every two years to monitor cultural resources. The agreement ended months of opposition, threats of legal action and negotiations between the county, Kinder Morgan, Altar Valley ranchers and other groups.

#### [Salt River Project Contracts To Buy More Geothermal Power](#)

[Arizona Republic, June 17] Salt River Project is increasing the amount of electricity it contracts to purchase from geothermal power plants in Southern California. SRP added 37 megawatts to its existing 50-megawatt contract. One megawatt is enough electricity to power about 250 homes at once, when a power plant is running. The geothermal power plants run by CalEnergy are in the Salton Sea area. The contracts begin in 2016 and increase over time until SRP will be receiving 87 megawatts from the company in 2020. That amount of power will be enough for nearly 22,000 homes at once. The contract runs to 2039. SRP has a goal to meet 20 percent of its electricity demand from renewable energy and energy efficiency by 2020.

## **ALTERNATIVE ENERGY & EFFICIENCY**

#### [Mexico's Largest Rooftop Solar Array Features SolarWorld Solar Panels, Racking, System Design](#)

[Energy Business Review, June 23] An audio-headset factory in Tijuana, Mexico, is now home to the largest, privately owned roof-mounted solar installation in all of Latin America. The 1.16-megawatt system features solar panels, racking and system engineering from SolarWorld, the largest solar manufacturer in the Americas for nearly 40 years. The system will power the Mexico operations of Plantronics, a global producer of audio communications headphones. The project is the second of SolarWorld solar panels at a Plantronics facility. In 2011, the headset manufacturer installed 608 kilowatts of roof-mounted and carport-mounted solar arrays at its headquarters in Santa Cruz, Calif. "Being responsible with the environment is not a luxury, it is a commitment," said César López, director of government relations for Plantronics Tijuana. "As part of that commitment, it was important to us to select SolarWorld solar panels and racking, which are manufactured in North America according to the highest standards of quality, safety and sustainability." Developed and installed by 3Tek Solar, a solar integrator based in Tijuana, the system is composed of 4,284 high-performance SolarWorld solar panels. About 1.14 megawatts of those panels are mounted on the factory's industrial metal-seam roof using SolarWorld's Sunfix Plus racking product. An additional 20 kilowatts are installed atop a covered walkway at the factory's entrance. The system also features SMA Sunny Central inverters. The installation is expected to produce 1.9 gigawatt hours of renewable energy each year. The power output will offset about 70 percent of Plamex's energy needs at the Tijuana plant and save nearly 3 million pounds of carbon dioxide.

#### [Solar Wind Energy's Downdraft Tower Generates Its Own Wind All Year Round](#)

[GizMag.com June 18] When we think of wind power, we generally think of huge wind turbines

sitting high atop towers where they can take advantage of the higher wind speeds. But Maryland-based Solar Wind Energy, Inc. is looking to turn wind power on its head with the Solar Wind Downdraft Tower, which places turbines at the base of a tower and generates its own wind to turn them. Described by the company as the first hybrid solar-wind renewable energy technology in the renewable energy market, the tower at the center of the system generates a downdraft that drives the wind turbines positioned around its base. This is done by using a series of pumps to carry water to the top of a tower standing up to 2,250 ft (685 m) tall, where it is cast across the opening as a fine mist. The mist then evaporates and is absorbed by hot, dry air, thereby cooling the air and making it denser and heavier than the warmer air outside the tower. This water-cooled air then falls through the hollow tower at speeds up to and in excess of 50 mph (80 km/h). When it reaches the bottom of the tower, the air is directed into wind tunnels that surround the base, turning wind turbines that are contained within the tunnels. Although the system requires large amounts of water, the bulk of the water emitted at the top of the tower is captured at the bottom and recirculated through the system, being pumped back up to the top with some of the power generated by the wind turbines. In this way, the company claims the system can generate electricity 24 hours a day, 365 days a year, when located in a hot, dry area – although electricity generation would be reduced in winter. Depending on the tower's geographical location, electricity generation could also be supplemented through the use of vertical "wind vanes" that would capture the prevailing wind and channel it into the tower.

#### [University of Cincinnati Reduces Energy Spend by \\$9M a Year](#)

[Energy Manager Today, June 19] The University of Cincinnati's aggressive approach to energy management is paying off. According to *Forbes*, the university has lowered its energy costs by \$9 million per year. The University of Cincinnati (UC) spends \$30 million per year on steam, chilled water, and electricity. Optimizing its energy investment has required ongoing coordination between a number of university administrative and academic departments. UC sponsors energy competitions between student housing units, and the university's custodians encourage students to turn off their lights, remove space heaters, and close fume hood sashes. The university incorporates energy-efficiency measures as part of planned building rehabilitations and upgrades rather than treating these as two separate projects. UC has also implemented energy-efficiency measures to address its two aging coal-fired boilers. Rather than retrofit the oldest of the two boilers, it was able to eliminate it by cutting the amount of ventilation in its research laboratories from 10–15 air changes per hour to four to eight air changes, based on whether or not the labs are occupied.

### **ENERGY/GENERAL**

#### [DOE Water-Energy Report Finds 'Dramatic' Amounts of Primary Energy Gets Dissipated](#)

[Energy Manager Today, June 20] Present day water and energy systems are tightly intertwined. Water is used in all phases of energy production, and energy is required to extract, convey, and deliver water. DOE's comprehensive report "[The Water-Energy Nexus: Challenges and Opportunities](#)" finds one of the most dramatic messages from the Sankey diagram (pictured below) is the amount of primary energy that is dissipated into the atmosphere through flue gases and cooling operations from thermoelectric power plants. Turning this waste heat into a resource rather than a cooling burden represents a significant opportunity to save both energy and water. Additionally, while power plants are the most obvious example, similar conditions exist in energy-intensive industries such as cement, metals smelting, refining, chemicals, and steel production.

#### [Energy Sector Role Driven by Climate Change](#)

[Fierce Energy, June 19] The energy sector is facing increasing pressures from climate change, and all segments of the industry will be affected by the changing global climate and the policy responses to it, according to a report published by the World Energy Council (WEC), the University of Cambridge Institute for Sustainability Leadership (CISL), the Cambridge Judge Business School, and the European Climate Foundation. The briefing focuses on the energy-related findings of the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) for policymakers and business leaders in the energy sector to identify the need to incorporate climate change mitigation and adaptation measures into energy policymaking, infrastructure planning, and investment decisions. "The energy sector has a critical role to play in the mitigation of greenhouse gases and in helping the world to adapt to the inevitable impact brought by climate change, some of which would directly affect energy-related activities," Rajendra K. Pachauri, chairman of the IPCC, said. "A thorough understanding of the implications of climate change will help the energy sector plan strategically for the future. AR5 contains a wealth of relevant information which will be central to this planning in the years to come."

## INDUSTRIES AND TECHNOLOGIES

### [DOE Launches Microgrid Competition To Support Communities](#)

[Electric Light & Power, June 27] The Department of Energy launched the Microgrid 2014 MVP Challenge, a competition to support resiliency and adaptation in communities across America. The challenge will recognize local organizations that have adopted successful grid strategies which can continue providing public services during power disruptions caused by severe weather and other events. The DOE's Microgrid 2014 MVP Challenge encourages organizations with operational microgrids, such as hospitals and water treatment plants, to submit their microgrid designs and operational data — such as when and how long the microgrid was disconnected from the traditional grid. The operational data will help the DOE learn more about microgrid performance and capture practical information that can be shared about how microgrids are being used to make communities more resilient. Entries will be judged according to four criteria: resiliency, clean energy system, energy efficiency and cost effectiveness. Microgrids are localized and can disconnect from the traditional grid and to help mitigate grid disturbances during emergencies.

### [Energy Department Invests \\$3.2 Million to Support Clean Energy Small Businesses and Entrepreneurs](#)

[U.S. Dept. of Energy, June 20] Chicago, IL – Secretary Moniz today announced \$3.2 million to launch the National Incubator Initiative for Clean Energy, which will create a national support network to serve the clean energy small business and entrepreneur community, providing critical technical assistance and training services in order to bring these businesses and entrepreneurs closer to market readiness. The Initiative will establish a suite of technological and training resources, connect critical industry and energy sector partners, enhance incubator best practices, and increase access to information about industry resources to advance innovative clean energy technologies emerging from universities and federal laboratories.

### [National Renewable Energy Laboratory Supercomputer Tackles Power Grid Problems](#)

[Electric Light & Power, June 27] Big data" is playing an increasingly big role in the renewable energy industry and the transformation of the nation's electrical grid, and no single entity provides a better tool for such data than the Energy Department's Energy Systems Integration Facility (ESIF) located on the campus of the National Renewable Energy Laboratory (NREL). Imagined by NREL leaders who foresaw the possibilities for high performance computing (HPC), the ESIF's HPC data center is fulfilling the goal of handling large and complex datasets that exceed traditional database processes. "As industry moves forward to integrate all these renewables, big data is a key piece of the puzzle," ESIF Business Development Manager Martha Symko-Davies said. "The links between modeling and simulation, hardware, and good, bad, and aggregated data—all parts of the whole puzzle—are captured at the ESIF through big data." That's why the ESIF's Peregrine supercomputer, dedicated by Energy Secretary Ernest Moniz in September 2013, is so important; it can do more than a quadrillion calculations per second as part of the world's most energy-efficient HPC data center.

### [New Water-Based Organic Battery Is Cheap, Rechargeable and Eco-Friendly](#)

[GizMag.com, June 29] Lithium-ion batteries have made portable, rechargeable electronics commonplace. Unfortunately, they do have some glaring drawbacks, including heat issues, being made with rare, toxic elements, and the fact the technology doesn't scale up very well, which limits applications. A team of scientists at the University of Southern California (USC) is working on an alternative in the form of a water-based organic battery that is not only cheaper and more environmentally friendly, but also holds the potential for scaling up for use in wind and solar power plants as a means to store large amounts of energy. The technology developed by the USC team is what's called an organic redox flow battery. It's a bit like a fuel cell, and a similar one was developed for NASA's Helios electric-powered drones. It consists of two tanks containing solutions of electroactive chemicals. These are pumped into a cell, which is divided by a membrane. The solutions interact through the membrane and electricity is produced. According to the team, the tanks can be of any size in comparison to the cells, so the total amount of energy that the system can store depends on how large the tanks are, which is one up on conventional batteries. The flow battery also has a better life span than lithium-ion batteries and its variants.

### [Project Tests New Storage for Energy](#)

[New York Times, June 21] Lancaster, TX – No one at the equipment lot here would blame you for failing to notice the drab green box sitting across from the spare transformers. But the lithium ions inside that refrigerator-size container are part of a wave of energy storage technology that could help Texas revolutionize its electric grid. Oncor, the state's largest transmission company, is

installing five of the batteries this summer in South Dallas neighborhoods, providing backup power to schools, traffic lights and a fire station. With the capacity to each store 50 kilowatts of electricity — enough to power three to five houses for three hours — the batteries are designed to kick in when the electricity trips off, whether because of a falling branch or equipment issues. “We want to see what they do,” said Don Clevenger, Oncor’s senior vice president of strategic planning. “This stuff works, it’s just, is it going to work in the real world?” (Oncor has been a corporate sponsor of The Texas Tribune.) Expanded coverage of Texas is produced by The Texas Tribune, a nonprofit news organization. To join the conversation about this article, go to [texastribune.org](http://texastribune.org). The project’s \$500,000 cost is an afterthought for the multibillion-dollar company, but it is part of a larger trend of investment in what the industry has long considered its holy grail: a backup source of low-carbon energy from intermittent sources like wind and the sun. In part because of its fast-growing renewable energy sector, Texas has become a major testing ground for storage technology, which, while still decades away from grid-wide use because of its costs, is gaining attention as the technology improves.

## LEGISLATION AND REGULATION

### [Both EPA and Business Happy with Supreme Court's Greenhouse Gas Ruling](#)

[Phoenix Business Journal, June 23] Talk about a split decision: Both the Environmental Protection Agency and business groups are declaring victory after the U.S. Supreme Court imposed limits on the agency’s ability to regulate greenhouse gas emissions from power plants and other stationary sources. The EPA is happy because the 5-4 decision affirms its authority to regulate greenhouse gas emissions under the Clean Air Act. But the court ruled greenhouse gas emissions alone can’t trigger EPA enforcement of the law’s Prevention of Significant Deterioration (PSD) program, which requires a permit before any major source of air pollution can be constructed or modified. To obtain such a permit, the facility must install the best available technology to control emissions. The court ruled, however, that the EPA could require facilities that are subject to PSD regulation because of other air pollutants to also control greenhouse gas emissions. Justice Antonin Scalia, who announced the decision, said the EPA is “getting almost everything it wanted in this case.”

### [Justices Uphold Emission Limits on Big Industry](#)

[New York Times, June 24] WASHINGTON — In a big win for environmentalists, the Supreme Court on Monday [effectively endorsed](#) the Obama administration’s efforts to regulate greenhouse gas emissions from sources like power plants, even as it criticized what it called the administration’s overreaching. The decision is one in a recent string of rulings upholding the Environmental Protection Agency’s authority to issue Clean Air Act regulations to curb climate change, and the agency celebrated the decision. But the combative tone of Monday’s ruling, along with its rejection of one of the agency’s principal rationales for the regulations under review, suggests that the road ahead may be rocky for other initiatives meant to reduce carbon emissions.

### [Kasich Signs Bill Freezing 'Green' Energy Requirements](#)

[The Columbus Dispatch, June 14] Gov. John Kasich has signed a measure that makes Ohio the first state to weaken its renewable energy standards, following a long and sometimes bitter debate that has put the state in a national spotlight. The governor signed the bill behind closed doors in his office yesterday. There was no accompanying statement from Kasich or his spokesman with the news release saying the bill had been signed. The leading supporters include the Ohio Chamber of Commerce, Timken Co., Alcoa and several electricity utilities.

### [Massachusetts Becomes First State in the Nation to Require Utilities To Modernize the Electric Grid](#)

[Mass.gov website, June 12] BOSTON – The Patrick Administration today announced that the Department of Public Utilities (DPU) has issued two groundbreaking orders requiring Massachusetts electric distribution companies to modernize the electric grid, building on the Commonwealth’s national leadership on energy efficiency and renewable energy. With these orders, Massachusetts is the first state in the nation to require electric distribution companies to take affirmative and far-reaching steps to modernize the electric grid. “The grid modernization order builds on Governor Patrick’s commitment to strategic investments in innovation and infrastructure, and creates jobs,” said Energy and Environmental Affairs Secretary Maeve Vallely Bartlett. “By implementing grid modernization, Massachusetts will once again be leading the nation in the clean energy revolution and enabling customers to participate in how and when they consume energy.”

### [New Energy Efficiency Standards for Furnace Fans To Reduce Carbon Pollution, Help Americans Save on Energy Bills](#)

[U.S. Dept. of Energy, June 25] WASHINGTON – As part of President Obama's Climate Action Plan, the Energy Department today announced a new energy efficiency standard for furnace fans, the latest of eight finalized standards and nine proposed standards issued since the Climate Action Plan was announced last year. These efficiency standards cut carbon pollution and save American families and businesses money by saving energy. The new standard for furnace fans will help reduce harmful carbon pollution by up to 34 million metric tons – equivalent to the annual electricity use of 4.7 million homes – and save Americans over \$9 billion in home electricity bills through 2030.

### [Online Tools Track Energy Policy](#)

[Energy Manager Today, June 26] Staying on top of state energy policy involves navigating legislative and public utility commission websites state by state and keeping track of information manually with lists and spreadsheets. Advanced Energy Economy (AEE) aims to change that with the launch of PowerSuite, an integrated set of online tools for tracking energy legislation and regulatory proceedings across all 50 states. Among the tools in PowerSuite are Billboard and DocketDash. Users can search a database of dockets and legislation from states across the country. They can then track and collaborate on legislation using Billboard or utility commission documents using DocketDash. Notifications can be set up to alert users when there are changes in bills or dockets, and summaries, notes and other information can be shared with colleagues. Additional tools developed for PowerSuite in the future will share its common interface and functionality, AEE said.

### [Senators Propose Raising the Gas Tax for the First Time Since 1993](#)

[The Hill, June 18] Sens. Chris Murphy (D-Conn.) and Bob Corker (R-Tenn.) on Wednesday unveiled the first bipartisan Senate proposal to raise the gas tax, broaching a dangerous political issue that lawmakers have avoided for years. The Murphy-Corker plan would raise the gas tax by 12 cents over the next two years, raising \$164 billion over the next decade and covering the shortfall in the Highway Trust Fund. It would index the gas tax to inflation, pegging it to the Consumer Price Index, to avoid future shortfalls. The lawmakers say it is time for Congress to pay for popular transportation programs instead of using budgetary gimmicks to hide their cost and pushing debt into the future. "We're losing hundreds of millions of dollars in economic productivity because we're failing to invest in our nation's roadway and rails," said Murphy. "You're not going to find, virtually, any member of Congress who is proposing to spend less money on infrastructure over the next 10 years." The question, they argue, is whether that spending will be covered by borrowing money from China or finding a way to pay for it now. Congress last raised the gas tax in 1993. Corker said he avoids violating Americans for Tax Reform's Taxpayer Protection Pledge by pairing the gas tax hike with other tax-relief legislation, such as a proposal to renew certain expired tax provisions indefinitely. Corker said he vetted his proposal with the anti-tax group, which is led by Grover Norquist.

### [Western Governors Support Bipartisan Land-Exchange Reform Bill Introduced in the House](#)

[Western Governors' Association, June 19] Western Governors strongly support federal land exchange reform legislation introduced in the House today (June 19, 2014) by Public Lands and Environmental Regulation Subcommittee Chairman Rob Bishop (R-Utah) and House Natural Resources Committee Ranking Member Peter DeFazio (D-Ore.). The [Advancing Conservation Education Act of 2014](#) (H.R. 4901) facilitates state-federal land exchanges, now a complex process that more often prevents land exchanges. Consequently, state lands remain locked in federal conservation areas, and states are deprived the economic benefit of land grants that were made to fund education and other purposes. The Western Governors' Association (WGA) [delivered a letter today](#) that expressed WGA's belief that the bill's language, which improves the process by which states can relinquish lands within federal conservation areas and select unappropriated lands of equal value, represents a strong step toward reform of the federal land exchange process.

## **WESTERN POWER**

### [DOE, Sandia Pioneer Solar Energy Concept](#)

[Albuquerque Journal, June 30] A soaring structure on the south side of the Department of Energy's National Solar Thermal Test Facility combines two cutting-edge technologies in concentrating solar energy: Compact Linear Fresnel Reflectors and molten salt thermal storage. Using them together is a pioneering concept. Today's Compact Linear Fresnel systems use water or oil as the thermal fluid to capture heat from solar collectors. The hot fluid heats water and

converts it into superheated steam to drive a turbine connected to a generator that produces electricity. With significant input from Sandia researchers, AREVA Solar designed the 100-foot-tall A-frame structure and Compact Linear Fresnel Reflectors, which are mirrors arranged in rows at ground level. The goal is to explore a different technology to collect and store heat generated by the reflectors in molten salt. If the system proves to be efficient and effective, AREVA will consider the technology for its solar plants around the world.

#### [FERC Actions Support Expansion of Real-Time Market in the West](#)

*Significant cost savings and improved support for renewables are expected*

[Business Wire, June 19] Folsom, CA – The California Independent System Operator (ISO) and PacifiCorp announced today that tariff amendments to expand the ISO's real-time energy scheduling market across multiple states in the West was approved by the Federal Energy Regulatory Commission (FERC). The new market, known as the Energy Imbalance Market (EIM), is expected to increase resource efficiency, reduce costs and more effectively use renewable and conventional resources. "The FERC approval marks a major step in making the ISO real-time market available to other energy balancing authorities across the West," said Steve Berberich, President and CEO of the California ISO. "Such a multi-state approach is an innovative and responsible direction that will facilitate a more efficient use of renewable resources while reducing costs for not only market participants, but the consumer." "With these rulings, we remain on track for the EIM to launch in October and to bring these needed and important changes to manage the electrical grid in the West far more efficiently," said Pat Reiten, President and CEO of Pacific Power, a division of PacifiCorp.

#### [How California Will Spend the \\$5 Billion a Year from Cap-and-Trade](#)

[SustainableBusiness.com, June 16] While oil and gas interests lobby hard to unravel California's cap-and-trade program (and its partner, Quebec), the state has decided how it will spend the approximately \$5 billion a year in revenue. Governor Brown reached an agreement with the state's budget committee that allocates 25% of the money as a stable funding source for high-speed rail, while the majority will be divided between public transit, such as inner city rail - and other low carbon transportation - and affordable housing/ sustainable communities. A minority of funds will be used for weatherization, water efficiency, sustainable forests and recycling. [Citizens are already receiving dividends as monthly credits on their utility bills.](#) The legislature votes this week. For 2014-2015, the state expects \$845 million in revenue, increasing to \$5 billion a year after 2016, as the program expands. Currently, only stationary sources of emissions have to pay to pollute - utilities, manufacturers and food processors. Next year, it includes mobile sources - all 14 refineries will have to pay for emissions tied to fuel sales across the state.

#### [Nevada Could Land Tesla Battery Plant with Discounted Electricity](#)

*The price of the electricity Tesla will need to power its monstrous new plant promises to be a key factor in the company's site selection*

[Arizona Republic, June 20] Much like apartments that advertise free utilities, development officials are holding out discounted electricity in hopes of landing the highly touted Tesla Motors Inc. battery factory that has five states competing for it. Palo Alto, Calif.-based Tesla said in February it is shopping in Nevada, Arizona, New Mexico and Texas for a site to build a factory the size of about 100 Walmart stores that would employ 6,500 people. The announcement touched off a high-stakes bidding war among Southwest states for what could be one of the largest manufacturing projects in the nation in recent memory. Tesla later said it would take a second look at its home state of California as well. The states all have tax benefits and other incentives, including cash grants, to land major economic developments such as the battery plant. But the price of the electricity Tesla will need to power its monstrous new facility promises to be a key factor in the company's site selection. Nevada recently passed a state law that could discount electricity 30 percent for the Tesla project. Meanwhile, San Antonio's utility provider has a rarely used "economic-development" rate that discounts power by as much as 50 percent, which has helped that region land a Toyota Motor Corp. factory.

#### [Storage Gets a Lift from California's \\$415 Million for Behind-the-Meter Generation](#)

*In an expected boost for storage, California commits \$415 million in funds until 2019*

[Smart Grid News, June 26] Last week, the California legislature approved \$415 million in funding through the state's Self-Generation Incentive Program (SGIP), which Governor Jerry Brown is expected to sign into law. The \$83 million per year SGIP program provides funds until 2019 for technologies that can enable behind-the-meter generation, including wind, fuel cells, and their pairing with energy storage to address issues like intermittency. Energy storage systems are being offered a \$1.63/W subsidy for an installed power capacity up to 3 MW in size. All funded technologies must meet a minimum ten-year warranty. While this funding level remains flat as compared to recent program years, it is a welcome sign that California is committed to providing

funds alongside its ambitious energy storage mandate. The mandate requires 200 MW of behind-the-meter distributed energy storage systems by 2020, and the SGIP funds can be an effective tool to meet the third-party ownership requirement in the mandate (more than 50% of all storage assets in the California mandate must be third-party owned).

## ARIZONA STATE INCENTIVES/POLICIES

### ARIZONA COMMERCE AUTHORITY (ACA)

#### INCENTIVES

Arizona has lowered taxes, streamlined regulations, and established a suite of incentives to support corporate growth and expansion. The Arizona Competitiveness Package, groundbreaking legislation adopted in 2011, makes it easier for existing Arizona companies to prosper and establishes Arizona as one of the most desirable places for expanding companies to do business. Give your company a competitive edge by utilizing Arizona's incentives.

- [Job Training](#)
- [Quality Jobs](#)
- [Qualified Facility](#)
- [Computer Data Center Program](#)
- [Research & Development](#)
- [Foreign Trade Zone](#)
- [Military Reuse Zone](#)
- [Angel Investment](#)
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- [SBIR/STTR](#)
- [Private Activity Bonds](#)
- [QECB's](#)

#### (ACA) PROGRAMS

#### DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (DSIRE)

- [Arizona Incentives/Policies](#)
- [Federal Incentives/Policies](#)
- [Solar Policy News](#) - DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

## GRANTS

The following solicitations are now available:  
(*Click on title to view solicitation*)

- [Solar Market Pathways](#) - Concept Paper Submission Deadline: May 28, 2014 5:00 PM ET. Full Application Submission Deadline: July 3, 2014 5:00 PM ET.
- [Renewable Energy for America](#) - Close date July 7, 2014

- [Hydrogen Fuel Cell Technologies Incubator](#) - Response due September 3, 2014
- [Manufacturing Machines and Equipment](#) - Response due September 15, 2014
- [Secure and Trustworthy Cyberspace](#) - Response due September 19, 2014
- [Nanomanufacturing](#) - Response due October 1, 2014
- [Civil Infrastructure Systems](#) - Response due October 1, 2014
- [Energy for Sustainability](#) - Response due October 30, 2014
- [Sunshot "Race to the Roof" Initiative](#) - Registration due October 31, 2014
- [Energy, Power, and Adaptive Systems](#) - Close Date: November 3, 2014
- [National Robotics Initiative](#) - Response due November 14, 2014
- [NSF/DOE Partnership on Advanced Frontiers in Renewable Hydrogen Fuel Production Via Solar Water Splitting Technologies 2014-2016](#) - Close Date: Dec. 11, 2014
- [Energy for Sustainability](#) - Response Due: February 19, 2015
- [Solar Market Pathways](#) - Response due July 3, 2015
- [Advanced Fossil Energy Projects - Solicitation Number: DE-SOL-0006303](#) Expiration Date: November 30, 2016
- [Energy Department Announces Next Phase of L Prize Competition to Create Innovative Energy-Saving Lighting Products](#) – Notification of Intent to Submit Product minimum of 30 days, but no more than 45 days prior to product submission. Monetary prize goes to the first successful entrant with the earliest timestamp.
- [Repowering Assistance Program](#) - Ongoing
- [Rural Business Enterprise Grants](#) - Ongoing
- [Rural Business Opportunity Grants](#) - Ongoing
- [Sustainable Agriculture Research and Education Grants](#) - Ongoing
- [Renewable Energy RFP's - Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power](#) – Various Deadlines
- [U.S. Dept. of Agriculture - Rural Development Grant Assistance](#)
- [Green Refinance Plus](#) - Ongoing

## ENERGY-RELATED EVENTS

### 2014

- ✚ [Solar 2014: 43rd Annual Conference](#)  
July 6-10, 2014 San Francisco, CA
- ✚ [Renewable Energy Development on Federal Lands 2014](#)  
July 16-17, 2014 Denver, CO
- ✚ [HydroVision International](#)  
July 22-25, 2014 Nashville, TN
- ✚ [Biomass 2014: Growing The Future Bioeconomy](#)  
July 29-30, 2014 Washington, DC

- ✚ [National Geothermal Summit](#)  
August 5-6, 2014 Reno, NV
- ✚ [Microgrid Development for Public & Private Sectors](#)  
August 12-14, 2014 San Diego, CA
- ✚ [2014 ACEEE Summer Study on Energy Efficiency in Buildings](#)  
August 17-22, 2014 Pacific Grove, CA
- ✚ [Symposium on Thermal & Catalytic Sciences for Biofuels & Biobased Products](#)  
September 2-5, 2014 Denver, CO
- ✚ [EPI's 4<sup>th</sup> Annual Energy Policy Research Conference](#)  
September 4-5, 2014 San Francisco, CA
- ✚ [HTUF 2014 National Meeting - The Forum for Action in High-Efficiency Commercial Vehicles](#)  
September 22-24, 2014 Argonne, National Lab - Argonne, IL
- ✚ [Geothermal Energy Expo](#)  
September 28-October 1, 2014 Portland, OR
- ✚ [AWEA Offshore Windpower Conference & Exhibition 2014](#)  
October 7-8, 2014 Atlantic City, NJ
- ✚ [Solar Power International](#)  
October 20-23, 2014 Las Vegas, NV
- ✚ [GreenBuild International Conference & Expo](#)  
October 22-24, 2014 New Orleans, LA
- ✚ [World Bio Markets USA](#)  
October 27-29, 2014 San Diego, CA
- ✚ [Governor's Celebration of Innovation](#)  
November 13, 2014 Phoenix, AZ
- ✚ [Solar Power Generation USA 2015](#)  
February 4-5, 2015 San Diego, CA
- ✚ [ASU Sustainability Series Events](#)
- ✚ [Green Building Lecture Series](#)  
Granite Reef Senior Center Scottsdale, AZ