HIGHLIGHTS

The Southwest Energy Efficiency Project (SWEEP) continued to build momentum towards more efficient energy use in the region in 2015.

With advocacy and support from SWEEP, the electric utilities in the region helped their customers save about 2,400 GWh per year from energy efficiency programs implemented in 2015, equivalent to the electricity use of 230,000 typical households. The utilities estimate that their 2015 programs will provide households and businesses about $650 million in net economic benefits over the lifetime of energy efficiency measures installed that year, while also reducing CO₂ emissions by millions of tons and water consumption by billions of gallons.

With support from SWEEP, states, cities and counties continued to adopt either the 2012 or 2015 version of International Energy Conservation Code (IECC). As of 2015, we estimate that about 45 percent of new housing permits were issued in jurisdictions that have adopted a state-of-the-art building energy code.

SWEEP helped to advance policies that are facilitating the deployment of electric vehicles in 2015, with Colorado and Utah ranking as two of the top ten states nationwide for EV sales.

SWEEP maintained its support of industrial energy efficiency improvements in 2015, and we played a significant role in influencing and supporting EPA’s Clean Power Plan. In addition, SWEEP generated considerable press and social media coverage of energy efficiency issues and opportunities.
SWEEP continued to support the expansion and enhance the effectiveness of utility energy efficiency programs in the Southwest during 2015. SWEEP advocated for increased funding for utility demand-side management (DSM) programs as an intervener in proceedings before state public utility commissions in most of our states. In addition, we influenced energy efficiency programs and policies through advising utilities and through interactions with state policy makers. We estimate that total DSM program spending across electric utilities in the region was around $381 million in 2015, up about $40 million relative to funding in 2013 (see table below).

Electric Utility DSM Spending in the Southwest, 2002-15

<table>
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<tr>
<th>State</th>
<th>DSM program budget (million $ per year)</th>
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<tr>
<td>AZ</td>
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<td>CO</td>
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<td>Region</td>
<td>29</td>
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The energy savings achieved by electric utilities in the region in aggregate is also increasing. The two charts below show the energy savings achieved by the largest electric utilities in the region each year as a fraction of retail electricity sales over the past eight years. The leading utilities – Salt River Project (SRP), Arizona Public Service Co. (APS) and Tucson Electric Power Co. (TEP) – achieved savings equal to 1.5-2.0 percent of their electricity sales in 2015. Two other major utilities – Xcel Energy-CO and Rocky Mountain Power (RMP) – saved between 1.0-1.5 percent of sales from their 2015 programs. For comparison, no utility in the region saved more than 1.0 percent of sales in 2007 and only one did in 2008. In addition, all seven major utilities were above the national average savings percentage as of 2015, which was approximately 0.7 percent of retail electricity sales.

Collectively the electric utilities in the region helped their customers save about 2,400 GWh per year from energy efficiency programs implemented in 2015, equivalent to the electricity use of 230,000 typical households. The utilities estimate that their 2015 programs will provide households and businesses about $650 million in net economic benefits over the lifetime of energy efficiency measures installed in 2015, while also reducing CO₂ emissions by millions of tons and water consumption by billions of gallons.
Energy Savings Achieved by Major Electric Utilities in the Southwest
*(savings as a percentage of retail sales)*

**Arizona Utilities**

![Arizona Utilities Graph]

**Colorado, Utah, Nevada and New Mexico Utilities**

![Colorado, Utah, Nevada and New Mexico Utilities Graph]
Arizona

Electric utilities in Arizona spent about $120 million on energy efficiency programs in 2015 and budgets will remain steady or move up slightly in 2016. According to ACEEE, Arizona and California are the leading states in the nation outside of New England with respect to energy savings achievement from electric utility programs.

During 2015, SWEEP advised APS, TEP and SRP on how to maximize cost-effective energy savings, including supporting approval of new programs and expansion of the efficiency measures within existing programs. Of particular note, the Arizona Corporation Commission (ACC) approved new Demand Side Management (DSM) plans for both APS and TEP. These plans include a number of new programs and measures for residential and business customers that had been pending at the ACC for quite some time.

SWEEP also developed strong relationships with the two new commissioners who took office in January 2015. We successfully worked with these and other commissioners to increase their support for energy efficiency in general and the Energy Efficiency Resource Standard (EERS) in particular.

SWEEP helped organize a set of workshops in 2015 to educate the ACC and utilities about the innovative technologies and programs design strategies that the utilities can employ to achieve the standard in the future. The workshops were well received by the ACC, and started to have an influence on utility DSM plans.

SWEEP worked to improve the Integrated Resource Planning (IRP) process in Arizona in 2015. We helped organize workshops and actively participated in them including providing recommendations, some of which were adopted by the ACC. These include revisiting load forecasts in light of recent trends for greater energy efficiency and reduced load growth, greater consideration of new demand-side technologies, consideration of multiple energy efficiency scenarios, and increased transparency and consultation in the preparation of future IRPs.

SWEEP also engaged in SRP’s 2014-2015 pricing proceeding to oppose increases to the basic service charge (BSC) and advocate for adequate energy efficiency funding. This work included mobilizing allies to oppose the BSC increase. As a result of this work, SRP agreed to phase in an increase in the BSC, rather than implement it in one step.

Last but least, SWEEP intervened in a rate case that was filed by UNS Electric in 2015. UNS is a smaller utility owned by the same holding company that owns TEP, but this rate case is likely to be very influential in affecting the positions of the ACC in future rate cases covering the larger utilities (APS and TEP). SWEEP intervened in the case and opposed proposals by the utility to: 1) increase the monthly fixed charge; 2) adopt demand charges for residential customers; 3) adopt a lost revenue recovery mechanism in between rate cases; and 4) reduce the scope of tiered rates. A decision in the case is expected in the summer of 2016.

Colorado

Xcel Energy is the main investor-owned utility in Colorado, serving about 1.4 million electric customers. Due in part to SWEEP’s recommendations, Xcel Energy implemented a number of innovative programs in 2015 including a multifamily housing pilot program, a wifi-enabled smart thermostat program, an LED street lighting program and a shift to upstream incentives for LED lamps in the commercial sector. Xcel surpassed the energy savings goal established by the Colorado Public Utilities Commission (PUC) in
2015 and did so while underspending its approved budget. In addition to influencing 2015-16 programs, SWEEP provided recommendations to Xcel Energy for its 2017-18 DSM plan, which will be filed in June, 2016.

SWEEP also worked on expanding the energy efficiency programs of other utilities in Colorado in 2015. This included advising Black Hill Energy (BHE) which filed a new DSM plan in May, 2015. Black Hills is an investor-owned utility serving about 100,000 customers in southern Colorado. SWEEP provided detailed comments and recommendations for enhancing BHE’s plan and participated in settlement negotiations with BHE and other stakeholders. A settlement among all parties was reached which includes a number of recommendations proposed by SWEEP. The settlement was approved by the Colorado PUC.

SWEEP also interacted with rural electric cooperatives and urged them to expand their energy efficiency programs, providing suggestions for new and revised programs at meetings held by the state association of rural electric cooperatives. In part due to our advocacy, the state rural electric association formed a new committee to work on energy efficiency program collaboration and expansion. In addition, SWEEP completed and disseminated a new publication on leading rural electric cooperative energy efficiency programs throughout the country. The study is being used to support advocacy for expanded energy efficiency programs by rural co-ops. 
(http://www.swenergy.org/data/sites/1/media/documents/publications/documents/Leading_REC_Energy_Efficiency_Programs_Jan_2016.pdf)

Nevada
SWEEP provided feedback to NV Energy as it implemented its DSM programs during 2015. NV Energy spent about $46 million on energy efficiency and demand response programs in 2015, similar to the amount in recent years. More important, NV Energy increased the energy savings resulting from its programs to about 246 GWh per year in 2015, a 44 percent increase compared to savings achieved in 2013.

SWEEP influenced a new three-year DSM Plan for Nevada Power Company in southern Nevada that was filed with the Public Utilities Commission of Nevada (PUCN) in July, 2015. We then participated in the docket in which the PUCN reviewed and approved the plan in the second half of the year. While the utility’s Plan called for further expansion of the DSM budgets and energy savings during 2016-18, the PUCN turned hostile to energy efficiency and decided to eliminate three popular and cost-effective programs implemented by the utility (the residential lighting, refrigerator recycling and high efficiency pool pumps programs). SWEEP did considerable work to organize business criticism of these unjustified cuts and we were able to get some favorable press coverage, but the PUCN could not be swayed.

On the positive side, NV Energy has accepted a number of the programmatic recommendations that SWEEP made leading up to and during the docket. Most notably, NV Energy will be implementing a new Home Energy Assessments program throughout the state that includes direct installation of some low-cost measures (including LED lamps) and promotion of other programs and measures that are higher cost.

SWEEP also worked on new policies to stimulate greater levels of utility energy efficiency investment in Nevada in 2015. Specifically we developed proposals for: 1) Energy Efficiency Resource Standards; 2) decoupling as an alternative to the controversial lost revenue recovery mechanism now in place; and 3) a shareholder incentive mechanism based on the performance of the utility’s energy efficiency programs.
We presented these proposals to policy makers, NV Energy, PUCN commissioners and other stakeholders in advance of and during the 2015 legislative session. Unfortunately, none of our proposals were enacted.

SWEEP also participated in a rulemaking that was opened by the PUCN to consider alternatives to lost revenue recovery, which has been very controversial and problematic in Nevada. SWEEP, the staff of the PUCN, and the consumer advocate supported some form of decoupling, although NV Energy did not. The rulemaking concluded with the PUCN adopting a fixed adder to cost recovery, along the lines of what the NV Energy requested. While not what we advocated, it is progress in that lost revenue recovery is no longer in effect. The upshot is that NV Energy has been willing to expand its EE programs under this new policy.

**New Mexico**
In New Mexico, SWEEP advised Public Service Company of New Mexico (PNM) and participated in a docket to review a new two-year DSM plan during the grant period. SWEEP prepared a number of recommendations for enhancing the DSM plan filed by PNM. Some of our recommendations were accepted by PNM and included in the plan the utility filed, including implementing a new program focused on multifamily buildings occupied to a high degree by low-income households, as well as shifting to midstream incentives in some of the business programs. These program enhancements will help PNM increase the energy savings it achieves. The plan was approved by the New Mexico Public Regulation Commission (PRC) in May, 2015.

Later in the year, SWEEP provided recommendations for PNM’s next DSM plan which will be filed in May 2016. PNM has accepted many of our recommendations, which should lead to their filing a stronger DSM plan and ultimately achieving more energy savings.

SWEEP participated in a PNM rate case that got underway in the second half of 2015. We helped develop testimony filed by the Coalition for Clean, Affordable Energy that supported PNM’s decoupling proposal as well as opposed an increase in the monthly fixed charge. We worked to secure support of decoupling (with some caveats) by the state’s consumer advocate. SWEEP also developed testimony proposing improvements in a new tariff proposed by the company for LED street lighting. A decision in the rate case is expected in the summer of 2016.

SWEEP also provided advice to Southwestern Public Service Company (SPS), a smaller utility owned by Xcel Energy, which filed a new DSM Plan in 2015. SWEEP presented recommendations for increasing energy savings targets above the levels proposed by the utility, and we participated in settlement negotiations. A settlement was reached and approved by the PRC that includes a number of recommendations made by SWEEP.

**Utah**
Rocky Mountain Power (RMP), a subsidiary of PacifiCorp, is the single investor-owned electric utility in Utah. SWEEP and its partner Utah Clean Energy (UCE) engaged in a number of activities aimed at expanding the scope and positive impacts of RMP’s DSM programs during the grant period. We provided advice as RMP revised its efficiency programs for residential customers, we supported enhancing a bill credits program for large customers, and we advocated for a small business direct installation program. Many of our recommendations were accepted by RMP and other stakeholders.
RMP ramped up its energy efficiency programs in 2015, and energy savings increased about 16% compared to savings achieved in 2014. This was due in large part to a new PacifiCorp IRP that calls for increased investment in and energy savings from energy efficiency programs and measures, relative to PacifiCorp’s previous IRP. This bodes well for EE programs in Utah in 2016 and beyond. In addition, SWEEP and UCE supported a proposal by RMP to increase the utility bill surcharge that pays for DSM programs. With our support, the surcharge was increase to four percent of customers’ utility bills effective January 1, 2016.

SWEEP and UCE also provided input on legislation developed by RMP known as the Sustainable Transportation and Energy Plan (STEP), which was approved by the Utah legislature in 2015. The legislation authorizes RMP to invest in electric vehicle charging infrastructure as well as shift to capitalization of its energy efficiency program expenditures.

Wyoming
SWEEP continued to provide recommendations for increasing the effectiveness of Rocky Mountain Power’s DSM programs in Wyoming in 2015. Motivated in large part by its regional IRP, RMP has been expanding its DSM programs in Wyoming and striving to increase the energy savings achieved by its Wyoming customers. 2015 results will be available soon.

BUILDINGS PROGRAM

Building Code Education and Implementation
The SWEEP buildings program continued to advance the adoption of the newest energy codes, the 2012 and 2015 International Energy Conservation Code (IECC), in 2015.1 SWEEP was successful in helping convince many municipalities in Arizona to adopt either the 2012 or 2015 IECC, bringing the percentage of new construction affected by one of these up-to-date energy codes in the state up to 64 percent. In Colorado, four communities adopted the 2015 IECC bringing the percentage of new construction required to comply with either the 2012 or 2015 IECC up to 36 percent in the state. The largest community in Colorado to adopt the 2015 IECC was Aurora, which had nearly 1,000 residential units permitted in 2015.

In Colorado, the cities of Aurora and Pueblo, along with Boulder and Pueblo Counties, adopted the 2015 IECC. A number of other cities including Denver, Centennial, Parker, Longmont, Vail, Avon, Golden and Arvada began to consider adopting the 2015 IECC; all of these cities are anticipated to adopt the 2015 IECC in early 2016. SWEEP actively participated in code deliberation processes in these jurisdictions. We submitted amendments and testified for numerous code requirements to maintain the stringency of the 2015 IECC. In addition, we provided funding for training on the 2015 IECC and met with other stakeholders that are participating in the code deliberations in Denver.

In Arizona, SWEEP worked with the utilities APS, SRP and TEP to support energy code advancements in the state. The City of Prescott was the largest community to adopt the 2012 IECC during this period. The 2015 IECC was under discussion by the communities of Phoenix, Scottsdale and Apache Junction, with SWEEP participating in the process.

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1 SWEEP advances the adoption of either the 2012 or 2015 IECC because the energy efficiency requirements in both versions of the model energy code are similar.
In Utah, the state adopts building codes that are mandatory statewide. SWEEP and our allies including Utah Clean Energy were successful in convincing the state to adopt the 2015 IECC without any weakening amendments for new commercial buildings. Regarding new homes, we worked to limit weakening amendments that were proposed by home builder organizations. We urged the Utah Governor’s Office of Economic Development to request cost effectiveness analyses of the 2015 IECC and ASHRAE 90.1-2013. Cost effectiveness studies were distributed with a letter of support from Governor’s Office of Energy Development to energy code stakeholders. Utah-specific educational factsheets were developed to present the energy, economic, and air quality impacts of adopting the 2015 IECC in Utah and shared these with energy code stakeholders. The new residential energy code adopted by the state, while not the full 2015 IECC, is a significant improvement over the previous residential energy code.

In Nevada, we supported a homebuilder association initiative to support energy code compliance. SWEEP researched the proposal and spoke with numerous organizations before supporting the initiative. SWEEP staff also met with the Builders Association of Northern Nevada (BANN) and the Northern Nevada Building Officials advocating for adoption of the 2012 IECC, and communicated with Reno city staff on the benefits of adopting the 2012 IECC. The City of Reno finalized the adoption of the 2012 IECC in February, 2016.

There were approximately 100,000 residential building permits issued across the SWEEP region in 2015, a seven percent increase relative to the number of permits issued in 2014. We estimate that about 45 percent of permits were issued in jurisdictions that have adopted either the 2012 or 2015 IECC. Less than two percent of construction permits are in communities that have adopted the 2015 IECC. However, these percentages will increase in 2016 and beyond as more jurisdictions adopt the 2015 IECC.
Building Energy Code Compliance
SWEEP also engaged in a number of activities to enhance code compliance in 2015. We worked with the Utah Office of Energy Development (OED) and RMP to plan a 2015 energy code training strategy, and we supported adequate funding for code training. We also recommended involving the Utah Energy Code Ambassadors in statewide energy code training. In Wyoming, we worked with the state energy office staff and key stakeholders in the state on potential training topics. Four energy code trainings took place in Utah and four occurred in Wyoming in 2015.

SWEEP worked with the Nevada Governor’s Office of Energy, code officials, builders and energy efficiency contractors to develop the Success with Energy Code guide for Nevada. The guide provides information to educate code officials and builders/contractors on how to construct new homes that comply with the 2012 IECC. SWEEP then helped convince NV Energy and Southwest Gas Company to purchase the guides for distribution in the state. In addition, we organized a training on the guide and the new energy code that was provided in Northern Nevada.

Energy Codes and Utility DSM Programs
SWEEP worked with Xcel Energy to include energy code training in its 2015-2016 DSM plan and budget. At our suggestion, Xcel allocated $25,000 of its Business Education budget to support communities in providing code training. SWEEP drafted the 2015 training plan for Xcel, with coordination of the Colorado Energy Code Collaborative group. The plan was accepted and Xcel selected a contractor to provide this training in 2015 and 2016.
Beyond Energy Code Efforts

SWEEP worked with stakeholders in New Mexico to educate policy makers and advocate for continuation of the Sustainable Building Tax Credit. The tax credit had been in place in New Mexico since 2007, but would have expired if not extended. The tax credits were continued in 2015 at substantial levels, although at reduced amounts relative to previous levels. The credits were capped at the values for a home of 2,000 square feet. New requirements were added for water conservation features.

SWEEP developed two tax credit proposals for energy-efficient new residential and commercial buildings and building renovations for Colorado. We participated in a stakeholder group that educated policy makers and led to the commercial building tax credit being introduced in the legislature. The bill passed in the State House of Representatives but only made it partially through the State Senate. Nonetheless, SWEEP supported the proposal and helped to obtain significant private support in the course of advancing this proposal.

SWEEP continued to partner in the facilitation of the Southwest Home Performance Collaborative. This collaborative brings together utilities and other key stakeholders working on whole house retrofit programs. During 2015 we held meetings on Home Performance with ENERGY STAR program requirements, data analytics and use of HPXML, the addition of new technologies to home retrofit programs, and next steps to continue the programs in areas where cost effectiveness is challenging.

SWEEP also worked to advance commercial building energy performance benchmarking and disclosure in 2015. We submitted comments to the Colorado PUC regarding data access and privacy rules. As a result of this proceeding, the PUC adopted new data access and privacy rules, thereby facilitating benchmarking in multi-tenant properties. In addition, and with SWEEP’s support, Xcel Energy began offering automated energy consumption data upload for ENERGY STAR Portfolio Manager benchmarking. This process, known as Portfolio Manager Web Services, makes it much easier for building owners to benchmark their buildings. RMP in Utah also implemented automated data upload for commercial building energy performance benchmarking in 2015.

In Arizona, SWEEP met with utility commission staff and SRP to discuss benchmarking and data access for Arizona utilities. SWEEP provided the ACC with resources on data access and benchmarking, and encouraged SRP to fully implement Portfolio Manager Web Services.

SWEEP and its partner Utah Clean Energy also supported Salt Lake City’s Project Skyline and the Mayor’s Skyline Challenge. Over 40 properties participated in the first year of the Mayor’s Skyline Challenge, representing nearly 9 million square feet of commercial and industrial building space. Participants in the Mayor’s Skyline Challenge agree to evaluate their building’s energy use, set energy savings goals, and undertake energy-saving projects.

SWEEP promoted higher incentive tiers in utility design assistance and incentives programs for new residential and commercial buildings. For example, we supported and achieved modifications to Xcel Energy’s residential new construction program including adding a new tier for homes that are at least 40 percent more efficient than local codes. This addition supports construction of highly energy efficient new homes, not just homes that exceed minimum code requirements by a modest amount.
TRANSPORTATION PROGRAM

SWEEP’s transportation program worked in 2015 with states, local governments and utilities to: 1) accelerate the purchase of electric vehicles (EVs); 2) work with metropolitan planning organizations (MPOs) for smarter transportation goals and investments; 3) advocate for bus rapid transit (BRT) and multimodal transportation funding; and 5) raise awareness of the recent trend towards declining passenger vehicle-miles traveled (VMT) per capita.

Advancing Electric Vehicles

In Utah, two policies that SWEEP advocated to support the adoption of EVs were adopted in 2015:

- **HB 410** ([http://le.utah.gov/~2015/bills/static/HB0410.html](http://le.utah.gov/~2015/bills/static/HB0410.html)) broadens the authority for performance contracting by public agencies to include vehicles; this creates more opportunities for larger scale fleet replacement with EVs.
- **HB 15** ([http://le.utah.gov/~2015/bills/static/HB015.html](http://le.utah.gov/~2015/bills/static/HB015.html)) reauthorized the $1500 EV tax credit.

In Colorado, one major effort involved recruiting 28 organizations and local governments to send a letter to Colorado Gov. John Hickenlooper asking him to make EVs a second term priority: ([http://swenergy.org/Data/Sites/1/media/documents/news/news/file/Letter_to_Gov_Hickenlooper_on_EVs_Feb_23_2015.pdf](http://swenergy.org/Data/Sites/1/media/documents/news/news/file/Letter_to_Gov_Hickenlooper_on_EVs_Feb_23_2015.pdf)). The letter asked the Governor to develop a strategy to accelerate the EV market that engages utilities and auto dealers, creates electric highway corridors, increases workplace charging and expands current incentive programs. The Governor responded by inviting multiple stakeholders to join a new EV Coalition and asking the state energy office to increase its efforts on EVs. This led to the creation of a new “wired workplaces” statewide workplace charging effort, increased funding for fast chargers through the Charge Ahead program, and a new EV outreach effort in both the metro area and the rest of the state.

Another effort focused on working with local governments to advance EV market penetration at the city and county level. We published a detailed analysis of steps that two local governments (Boulder and Boulder County) could take to advance EVs. This led to the adoption of EV goals into the city’s Climate Action Plan and the creation of an EV program within the county’s Sustainability Office. ([http://swenergy.org/data/sites/1/media/documents/publications/documents/Boulder_Electric_Vehicle_Infrastructure_and_Adoption_Assessment_April-2015.pdf](http://swenergy.org/data/sites/1/media/documents/publications/documents/Boulder_Electric_Vehicle_Infrastructure_and_Adoption_Assessment_April-2015.pdf)).

SWEEP took the lead in advancing the concept of local governments establishing a group purchase program designed to spur consumers to add solar photovoltaic (PV) to their homes and/or buy an EV. This is based on the success of solar group buy programs. After we proposed this, multiple local governments (including the City and County of Denver, Boulder County, the City of Boulder, and Adams County) agreed to a joint program. This program ran from September through December.

This program was very successful, leading to a quadrupling of Nissan Leaf sales in the participating communities (see chart below). Survey worked showed that 78% of participants had not been planning to acquire an EV. During the course of the program, a full 5% of all Leaf sales in the United States took place at the participating dealer, Boulder Nissan. Based on this success, two additional pilots were created, one in Northern Colorado and one in the Salt Lake City area. In addition, communities across the country are now creating EV group buy programs.
Other local government efforts include work with the City and County of Denver, Fort Collins, the City of Boulder and Boulder County on incorporating EV charging requirements into their building codes. Boulder County adopted EV wiring requirements for residential and commercial buildings. The City of Denver process was not completed until spring of 2016, but their building code committee recommended approval of a proposal from SWEEP for residential EV prewiring in late 2015. SWEEP also provided input to Salt Lake City, helping them modify their existing EV friendly charging requirements to be more effective.

SWEEP also worked on engaging utilities to do more to support EV adoption in 2015. In Colorado, we pointed out that the increasing block rate structure was unfavorable for EV adoption, and asked Xcel Energy to propose a time-of-use (TOU) energy rate option for EV users. Xcel did propose a TOU rate option in their rate case that was filed in early 2016. SWEEP also advocated that RMP create an EV tariff and invest in the EV charging network, both through company-owned charging and by providing incentives for customer-owned charging. These concepts were included in the STEP legislation that was introduced and passed in 2016.

Colorado and Utah continued to rank as two of the top ten states for EV sales in 2015. (The highest market penetration for EVs in the United States was in Oregon and California.) A report by Clean Edge that looked at per-capita registration of battery EVs (excluding plug-in hybrids) ranked Arizona, Colorado, Nevada and Utah as all being in the top ten states.\(^2\)

Improving Land Use and Transportation Planning

One of SWEEP’s goals for 2015 was to work with jurisdictions in the Denver area to adopt land use and transportation plans that are consistent with the climate and sustainability goals that the Denver Regional Council of Governments (DRCOG) adopted in 2010, and to further advance these goals in the major regional plan update. The 2040 plan update will not be completed until late 2016. In the meantime, we worked with a wide variety of civic and local government allies to shape this planning effort.

To date we have had two victories. First, we played a key role in getting DRCOG to adopt the most multimodal five-year spending plan in their history (the 2016-2021 Transportation Improvement Program). Second, we helped get the main policy committee to adopt strong sustainability goals for the 2040 plan, including a 60% reduction in per capita GHG emissions from transportation and a 10% reduction in per capita driving.

In Utah, the Wasatch Front Regional Council released their 2040 Plan. This plan continued their evolution towards a smart growth land use scenario and a more multimodal transportation plan, including a major new commitment to walkable and bikeable communities (http://www.sltrib.com/home/2038803-155/new-bike-paths-key-in-long-range). SWEEP submitted comments during the plan development process, generally supporting the most compact and multimodal scenarios.

Advancing Multimodal Transportation Funding and Bus Rapid Transit

In order for new development to be channeled into the nodes serviced by regional transit stations, mass transit services and associated bicycle and pedestrian infrastructure need to be planned and developed. One of the major obstacles is the fact that most state transportation revenues are legally limited to being used only for highway construction.
In 2015, we worked on two major efforts to address this barrier. The first was laying the groundwork for future legislation in Colorado that would allow the state’s share of gasoline taxes to be spent on either mass transit or highways. We met with the Colorado DOT leadership, and got preliminary support from them for this idea. This effort is a likely to be a priority in 2017.

The second effort was advocacy for a regional analysis of the potential for bus rapid transit (BRT), and advocacy for a significant investment of traditional “highway” funds into BRT infrastructure -- something that is clearly legal today. This follows on our release of a 2014 report on BRT potential in Colorado, which led the regional transit district (RTD) to propose such a study. We also obtained a commitment from the state Department of Transportation (DOT) to actively partner in the study.

We advocated for BRT in several corridors in 2015, including the BRT line between Boulder and Denver, which will open in 2016, and helped to get RTD to adopt a plan for a BRT network in the northern part of the region. In addition, we helped to build support in Denver for repurposing car lanes to BRT lanes.

In 2015, SWEEP helped lay the groundwork for the Colorado Pedals project, an ambitious commitment from Governor Hickenlooper to improve bicycle infrastructure throughout the state. This included a reallocation of safety funds from highway projects to bicycle and pedestrian safety projects, and a focused effort to invest $100 million over four years in improved cycling infrastructure.

In Utah, we supported efforts to give more authority to cities to raise funds for transit, which passed in the legislature along with a gas tax increase (http://www.sltrib.com/home/2285053-155/compromise-bill-to-raise-gas-tax).

**Education Regarding Vehicle Use Trends**

After fifty years of annual growth, VMT per capita began flattening out and even declining approximately a decade ago. SWEEP worked in 2015 to educate transportation planners and other policy makers about these trends. We completed and disseminated an analysis of these trends and how MPOs and DOTs across the region have responded. Increasing awareness of the trends is particularly important in order to avoid excessive planning for, and investment in, highway expansion. (http://swenergy.org/data/sites/1/media/documents/publications/documents/Driving_Trends_and_Transportation_Funding_Aug_2015.pdf).
INDUSTRIAL PROGRAM

Collaboration with Utilities and Industrial Customers

SWEEP worked on improving the design of utility energy efficiency programs so that they are more attractive to industrial customers in 2015. SWEEP recommended changes related to industrial efficiency as part of our comments on comprehensive DSM programs implemented by Xcel Energy in Colorado, Public Service Company of New Mexico (PNM), Tucson Electric Power (TEP), Arizona Public Service Co. (APS), and Salt River Project (SRP) in Arizona. Partly due to our recommendations, Xcel Energy and PNM both proposed improvements to their offerings for large customers.

Xcel Energy is considering improvements to strengthen the strategic energy management (SEM) components of its energy information systems (EIS) and Process Efficiency programs. PNM will add a “customer-initiated program” option for large commercial and industrial customers, which will include SEM and energy manager co-funding. In other words, if one or more large customers request PNM to provide co-funding for an on-site energy manager and/or training in SEM, PNM will consider supporting this.

SWEEP co-authored and presented a paper on utility SEM programs at the 2015 ACEEE Summer Study on Industrial Energy Efficiency, together with Rocky Mountain Power and Xcel Energy. The paper reviewed the SEM programs of these two utilities, including program results, lessons learned and future plans. We also wrote and disseminated a paper on utility energy manager co-funding programs, highlighting the programs and results of five utilities in North America.

In Colorado and Utah, SWEEP continued to work directly with industrial companies through the Colorado and Utah Industrial Energy Challenge programs. SWEEP organized and led three well-attended industrial networking meetings in 2015. Several companies are pursuing projects as a result of discussions at these meetings. In coordination with the Colorado Energy Office, we recognized two industrial facilities for outstanding energy efficiency achievements: the MillerCoors Brewery in Golden and the Greeley Wastewater Treatment facility. From 2012-2014, these two facilities achieved combined energy savings of 700,000 MMBtu per year, resulting in cost savings of approximately $3.8 million per year.

SWEEP’s partner Utah Clean Energy (UCE) facilitated two industrial networking meetings in Utah in 2015. UCE and the Utah Office of Energy Development recognized three industrial firms for outstanding energy efficiency achievements: Rio Tinto Kennecott, J.R. Simplot and Utah Paper Box. From 2012-2014, these companies achieved combined energy savings of 181,000 MMBtu per year in Utah, resulting in cost savings of approximately $960,000 per year.

The mining sector has typically been a challenging sector for energy efficiency improvements and utility DSM program participation. In 2015, SWEEP organized a webcast and discussion for utilities in our region on how to achieve more energy savings from this sector. The invited speaker from BC Hydro emphasized that it helps to provide incentives for large mining facilities to hire an energy manager. Participants included RMP (Utah and Wyoming) and NV Energy.

Policies to Advance Industrial Energy Efficiency and CHP

SWEEP addressed policy barriers to Combined Heat and Power (CHP) in 2015 through two efforts. First, SWEEP continued its efforts with Xcel Energy and the Colorado PUC to produce a final incentive and standby tariff for waste-heat-to-power facilities in Xcel’s Colorado service territory. We provided
testimony to the PUC and participated in a hearing. We succeeded in getting several important improvements to the tariff; however, the tariff will not be finalized until late 2016. SWEEP made the following suggestions which are being incorporated into the final tariff:

- Exempt recycled energy facilities smaller than 500 kW, and instead allow them to be on the general tariff, which is less complicated and less burdensome and costly.
- Allow recycled energy projects to be paid a reasonable price for any excess power they generate beyond power consumed on-site. This is particularly important for natural gas compressor station projects, which use very little energy on-site.
- Make three changes to the structure of the tariff to incent recycled energy customers towards more reliable operation and reduce their monthly fees to Xcel Energy.

In Arizona SWEEP worked with the ACC to adopt statewide interconnection standards for distributed generation including CHP. We provided detailed comments on the ACC’s draft interconnection standards. Our comments focused on bringing the draft standards, which were based on 2005 guidelines, up-to-date and up to the level of national best practices. The ACC’s work on finalizing the standards will continue in 2016.

SWEEP also collaborated with ACEEE, the Alliance for Industrial Efficiency, the Institute for Industrial Productivity, and other industry stakeholder groups to provide comments to the US Environmental Protection Agency (EPA) on how CHP and industrial energy efficiency should be treated under the Clean Power Plan. SWEEP played a significant role in drafting the group’s comments on treatment of CHP and industrial energy efficiency in EPA’s proposed Federal Plan and Model State Trading Rules. SWEEP also submitted comments directly to the EPA, proving the following recommendations:

- Under a rate-based approach, EPA should specify a “reference rate” for comparing the greenhouse gas (GHG) emissions from CHP that provides a more accurate indicator of the actual emissions benefits. SWEEP recommended using the average emissions rate from affected electricity generating units (EGUs) as the reference rate, based on either affected EGUs in each state or the relevant eGRID sub-region. By contrast, the EPA’s proposed reference rate is the compliance standard for gas-fired generating plants, which is a much lower emissions rate, and thus would credit a much smaller percentage of the output from CHP systems.
- Under a mass-based approach, EPA should clarify in the model rule that states can set aside allowances for CHP or industrial energy efficiency projects that are implemented independent of state or utility programs. Without set-asides (or proceeds from auctioning of allowances), these independent projects will not receive any direct incentives.

**CHP Technical Assistance**

Through September of 2015, SWEEP continued to lead the region’s efforts to increase the adoption of clean, cost-effective, reliable and well-designed CHP systems. Through a contract with DOE (which included CHP technical assistance and promotion in Texas and Oklahoma as well as in southwestern states), we worked directly with regional businesses and organizations interested in CHP to help them evaluate technical and financial feasibility, and walked them through the project development process. As part of this work, we provided technical assistance and CHP feasibility evaluations to approximately 70 city and county buildings, military bases, universities, hospitals, and manufacturing facilities in 2015.
FEDERAL, STATE AND LOCAL ENGAGEMENT

Support for Clean Power Plan

SWEEP remained highly engaged in efforts to influence EPA’s Section 111(d) Clean Power Plan rule in 2015. Working with the other regional efficiency organizations (REEOs) and others, we provided comments to the EPA. We also advocated that states in our region include energy efficiency potential in state plans and related compliance strategies. Following the announcement of the final rule in August 2015, SWEEP met with state energy and environmental officials to discuss the contribution that energy efficiency could make as a cost-effective CO2 emissions reduction strategy. In addition, SWEEP created a web page on our Clean Power Plan work. ([http://www.swenergy.org/policy/clean-power-plan](http://www.swenergy.org/policy/clean-power-plan))

As anticipated, the final Clean Power Plan rule requires states to ensure that utilities and other owners of electric generating units (EGUs) make significant reductions in the CO2 emitted by existing power plants during the compliance period while giving states and utilities considerable flexibility to pursue innovative and low-cost strategies for complying with the standards. The final rule adjusts the compliance period from 2020-2030 (as proposed) to 2022-2030 and removes energy efficiency as a building block for calculating emissions targets. However, in line with SWEEP’s advocacy and education work, energy efficiency still plays a central role in the EPA’s plan to achieve emissions reductions and is strongly suggested as a strategy that states should pursue. As a result, there will be a significant opportunity for states and utilities to maintain or scale up their energy efficiency efforts as a strategy for complying with the Clean Power Plan requirements in a cost-effective manner.

SWEEP provided comments to the EPA in response to the remaining sections that were open for comment after the final rule was published, and we worked to influence the responses of the Southwest states to EPA’s rule. In particular, we submitted detailed comments to the EPA on the Federal Plan, the Clean Energy Incentive Program, and the draft EM&V guidance.

We continued to support others who wanted to comment on the energy efficiency aspects of the Clean Power Plan or otherwise engage in conversations surrounding state planning efforts—including other non-profits as well as local and state governments. We completed and posted a summary of key energy efficiency provisions in the Clean Power Plan shortly after the final plan was announced. We succeeded in using this document to drive discussions and frequently heard from organizations that downloaded and used the document. In addition to our written materials, SWEEP team members gave numerous presentations on the Clean Power Plan and energy efficiency to a diverse set of influential groups, including a meeting of environmental advocates from the Western states and a meeting of tribal leaders in the Southwest.

SWEEP continued to conduct outreach in 2015 to state environmental agencies, state energy offices, and public utility commissions in our region that are involved in crafting state plans and otherwise implementing the Clean Power Plan. When working with these officials, we focused on the positive role that energy efficiency policies, programs, and measures can play in meeting the standards at low cost and with net economic benefits for each state. We encouraged states to support compliance paths that include and otherwise enable the full utilization of a broad set of energy efficiency policies and programs.

Because the state environmental officials that are taking the lead in responding to the EPA rule are often not familiar with energy efficiency policies and programs, we made a concerted effort to educate them regarding the large impact that energy efficiency initiatives, both utility and non-utility, can have on CO2 emissions from power plants and the types of policies and programs that could be implemented (or
strengthened) within each state to reduce the costs of compliance and provide the other benefits. As an example of this work, we organized a workshop on energy efficiency and the Clean Power Plan for state environmental officials and other key stakeholders in Arizona. Another example is the stakeholder workshop that we worked on in close collaboration with the Colorado Energy Office.

SWEEP also initiated a major study in 2015 that examines in detail the role that robust utility energy efficiency programs could play in helping each state in the region comply with the Clean Power Plan, and save money while doing so. The study develops a comprehensive set of utility energy efficiency programs that we believe are feasible for utilities to implement during 2016-30, examines the costs and economic benefits of the programs, and the contribution the programs could make to Clean Power Plan compliance. The study will be completed during the summer of 2016 and disseminated state-by-state in the fall.

**Support for Community and State-Based Energy Efficiency Efforts**

SWEEP supports state and local government efforts to improve the energy efficiency of public sector buildings and facilities, as well as state and local efforts to advance energy efficiency more broadly. These broader community and statewide efforts include energy efficiency financing programs, conversion to LED streetlights, and better access to utility data for building energy management purposes.

In 2015, SWEEP successfully supported the inclusion of an LED street lighting program for municipalities as well as converting the custom rebates for outdoor LED lighting to prescriptive rebates in the DSM Plan developed by the principal electric utility in Colorado (Xcel Energy). We also supported the adoption of a new LED street lighting tariff for Xcel Energy in Colorado and worked to ensure that municipalities opt-in to the new tariff (and associated LED retrofits). To date, about 50 cities and towns have opted into the new tariff.

SWEEP continued outreach to other communities to increase LED street lighting uptake and to solicit interest in joining DOE’s Outdoor Lighting Accelerator program. Entities in Garfield County, Colorado committed to becoming regional partners, representing the third regional partnership in the nation. Significant interest in LED outdoor lighting also exists at the local level in Nevada, and interest is increasing in New Mexico and Arizona as well. As part of this work, we hosted a webinar on LED outdoor lighting in the Southwest that covered current effort and opportunities for expansion.

SWEEP continued to support the development and implementation of state-administered Commercial PACE financing programs in Utah and Colorado in 2015. We held two complementary webinars on C-PACE in these two states, and provided technical assistance to public sector entities in order to help increase program uptake which is critical to the program’s sustainability. We also supported local PACE planning efforts in Albuquerque, NM as part of the city’s 2030 District implementation effort and we supported exploration of creating a Green Bank in Nevada.

SWEEP continued to organize and support a Local Government Working Group in 2015. This group provides opportunities for outreach to public sector entities at both the local and state level, peer-to-peer support, and identification and showcasing of best practices. The group currently includes over 100 participants from all six southwestern states. We conducted targeted outreach and provide customized assistance to individual communities, including on the topics of LED street lighting options, energy planning, data access, PACE, and other financing options.

Finally, SWEEP provided technical assistance to the New Mexico State Energy Office in 2015 related to
revisions of the state’s performance contracting program for efficiency improvements in public buildings, including third party verification. We also provided technical assistance to the states of Nevada and Colorado in the area of energy performance contracting. Additionally, we made progress related to energy consumption data access in Colorado, Arizona, and Utah. In particular, the primary utilities in Colorado and Utah have begun providing electricity consumption data directly to commercial building owners and to communities in a convenient electronic format.

COMMUNICATIONS

Through efforts to support the initiatives of our program staff and state representatives, SWEEP communications generated more than 75 media stories and broadcasts covering energy efficiency work in all of our program areas in 2015. SWEEP’s communications efforts this year were focused upon both defense and offense, trying to prevent roll-backs of utility energy efficiency programs and building energy codes, and promoting energy efficiency in the emerging and very energy intensive marijuana industry. We publicized Colorado’s new incentives for industrial waste-heat-to-power. Finally, SWEEP worked to publicize key staff reports on electric vehicles, driving trends, ACEEE scorecard results and other reports and events that help advance energy efficiency in the Southwest.

Nevada Legislative Campaign to Set Utility Goals for Energy Efficiency

NV Energy opposed this proposed legislation that was supported by SWEEP. Discussion of the bill was delayed until the last days of the session. SWEEP communications supported staff in finding strong voices from schools and businesses to speak with reporters about how utility energy efficiency programs help them cut costs and focus funding on education and jobs. SWEEP worked closely with Nevada reporters covering the utility sector and was successful in obtaining media support.

Nevada PUC Campaign to Support NV Energy’s Proposed Increased DSM Budget

In advance of the PUCN hearing on NV Energy’s integrated resource plan for southern Nevada, SWEEP issued a press release to publicize the extraordinary energy savings in Nevada from LED light bulb retrofits. NV Energy proposed increased funding for that program and others, including commercial and school energy efficiency programs. But in a surprise move, commissioners proposed shuttering the LED and schools programs and cutting


commercial rebates. SWEEP communications worked with the editor of the *Las Vegas Sun* and received a newspaper endorsement of energy efficiency programs. SWEEP also worked to find and prep spokespeople from Las Vegas area schools and businesses that would be impacted by the proposed program cuts, and they provided excellent public comment. Commissioners did fund the schools program for a year and maintained the current funding level for commercial energy efficiency. SWEEP also generated press coverage critical of PUCN’s decision.

### Utah Legislative Campaign to Prevent Weakened Building Energy Efficiency Codes
Utah’s legislature grappled with a decision over adoption of the 2015 IECC, buffeted by homebuilder concerns about rising construction costs and clean air advocates’ concerns about energy costs of and emissions from the state’s inefficient buildings.

SWEEP communications worked with partner Utah Clean Energy to protect residential building energy efficiency codes from being weakened. We worked to defeat HB 285 during the 2015 legislative session, which would have changed the state code adoption cycle from every 3 years to 6 years. But it resurfaced during the 2016 session.

SWEEP communications helped to host a stakeholder open house and tour of a residential home built to 2015 energy code standards. Six key members of the Uniform Building Code Commission attended and were hosted by a home builder. The committee formally recommended that the 2015 IECC codes be adopted during the 2016 legislative session and they were, although with weakening amendments for new homes. SWEEP helped place an opinion and an article in one of the state’s largest newspapers, the *Deseret News*.

### Generate Positive Press Coverage of the Clean Power Plan
SWEEP communications helped generate positive press coverage for EPA’s Clean Power Plan final rule after it was announced in August, 2015. SWEEP staff and state representatives were quoted praising the Clean Power Plan and talking about the role that energy efficiency can play in helping states to comply in a cost effective manner in the Denver Post, Arizona Republic, Deseret News, Santa Fe New Mexican, and elsewhere.

### Publicize Colorado’s Increased Incentive for Industrial Waste-Heat-to-Power
SWEEP communications issued a press release and received excellent press coverage of newly available Xcel Energy incentives for industrial projects that convert waste heat from operations into energy that can be used onsite. SWEEP supported the incentives that were approved by the Colorado PUC.
Publicize the Extraordinary Energy Use of Colorado’s Growing Industrial Pot Farms

Almost half of the annual 1.2% increase in City of Denver electricity use comes from pot-growing operations, according to a Denver Post article that references a recommendation by SWEEP’s Howard Geller that grow facilities switch to efficient LED lights. That article went viral and spawned many more requests for interviews with Dr. Geller. SWEEP began referring reporters to LED experts for comment.

Reports and Research

SWEEP communications worked to generate coverage of staff research and reports:

- **University Study Slams Costs of Energy Efficiency**: Howard Geller wrote an editorial that was placed with the Las Vegas Sun to debunk a study claiming energy efficiency programs are ineffective. The study was publicized just before the NV Energy filed its DSM programs plan and we wanted to strongly debunk it.

- **Southwesterners Driving Less**: SWEEP communications publicized the SWEEP report in three key states: Arizona, Utah and Colorado. A media teleconference call was held in Arizona and featured SWEEP’s report author as well as Arizona transportation experts who could add local comment. The report ran on radio and in the press in Arizona, Utah and Colorado.

- **Industrial Energy Efficiency Awards**: This year, SWEEP communications targeted media for both industrial winners of its Industrial Energy Efficiency awards. An intern wrote and placed an article on Greeley’s Wastewater Treatment plant in *Energy Manager Today*, and communications wrote an extensive article about MillerCoors Brewery’s efficiency upgrades for *Facilities Manager* magazine.

- **Construction Data in Visual Format**: SWEEP’s buildings program produced visual fact sheets of construction energy data and communications worked with the author to produce a promotional article for a construction management magazine.

SWEEP continues to develop relationships with the press and work on story development. All of the noteworthy 2015 press coverage is available on SWEEP’s web site at [http://swenergy.org/press-coverage](http://swenergy.org/press-coverage).
Other Communications

- **Social Media:** SWEEP reached more than 1,000 followers by the end of 2015 and had 325 Facebook followers. SWEEP’s Klout score is slightly higher than other REEOs that use Twitter: 48.

- **Blog:** SWEEP communications began the process of planning and developing a blog site that went live early in 2016.

- **ACEEE State Scorecard:** Publicized the higher rankings of Colorado and Arizona as well as the lower ranking of Nevada and New Mexico.

- **National Drive Electric Week:** Tied the Utah event to SWEEP’s transportation reports on electric vehicles.

- **Pope Francis’ Call to Care for the Environment:** Worked with Catholic deacon in Colorado and a member of Interfaith Power and Light in Arizona to place editorials that tie in support of energy efficiency.

OTHER ACTIVITIES

SWEEP organized its **12th Annual Southwest Utility Energy Efficiency Workshop** in Albuquerque, NM in 2015. The workshop provided a forum for discussion of the latest trends and emerging themes in utility DSM programs in the region. The 2015 workshop also featured presentations on EPA’s Clean Power Plan, leading energy savings programs targeted to low income households and to industrial customers, integrating energy efficiency and demand response for commercial customers, utility support for building energy codes, and distribution voltage optimization. Presentations from the 2015 workshop are available at [http://www.swenergy.org/workshop-archives](http://www.swenergy.org/workshop-archives).

SWEEP continued its partnership with the U.S. DOE and other regional energy efficiency organizations (REEOs) in 2015. With funding from DOE, all six REEOs are working within their regions in areas of mutual interest such as building code education and support, assistance to state and local governments, advancing energy efficiency in the industrial sector, and promoting emerging technologies within utility DSM programs. And as mentioned above, the REEOs have been collaborating in comments and outreach related to EPA’s Clean Power Plan.

SWEEP expanded its Allies Program in 2015. The Program involves solicitation of financial support from energy efficiency businesses and other organizations that support SWEEP’s mission. The Allies Program was launched in 2014 and had 29 participants at the end of 2015.
PUBLICATIONS

The following reports were published in 2015 and are available on the SWEEP web site at http://www.swenergy.org/publications.


SUPPORTERS

SWEEP is grateful for the financial support it received from the following organizations in 2015:

Anonymous Foundation
City of Boulder, Colorado
Colorado Energy Office
Denver Foundation
Edwards Mother Earth Foundation
Energy Foundation
Heising-Simons Foundation
Kaiser Foundation
U.S. Department of Energy

Arizona Public Service Company
New Mexico Gas Company
NV Energy
Public Service Company of New Mexico
Questar Gas Company
Salt River Project
Southwest Gas Company
Tucson Electric Power Company
Xcel Energy

In addition, SWEEP thanks its Allies for their financial support. SWEEP Allies are listed at http://www.swenergy.org/allies.
STAFF AND STATE REPRESENTATIVES (June 2016)

Howard Geller, Executive Director
Jim Meyers, Senior Associate and Director of Buildings Program
Will Toor, Senior Associate and Director of Transportation Program
Neil Kolwey, Senior Associate and Director of Industrial Program
Christine Brinker, Senior Associate Buildings Program
Gene Dilworth, Operations Director
Suzanne Pletcher, Director of Communications
Mike Salisbury, Senior Associate Transportation Program
Ellen Zuckerman, Senior Associate Utility Program
Ann Livingston, Program Manager for State and Local Engagement
Jeff Schlegel, Arizona Representative
Tammy Fiebelkorn, New Mexico Representative
Tom Polikalas, Nevada Representative
Kevin Emerson, Mitalee Gupta and Sarah Wright, Utah Representatives