2016 Annual Report

HIGHLIGHTS

Southwest utilities, states and localities continued to make substantial progress in improving energy efficiency in 2016, thanks in part to the efforts of SWEEP. Highlights include:

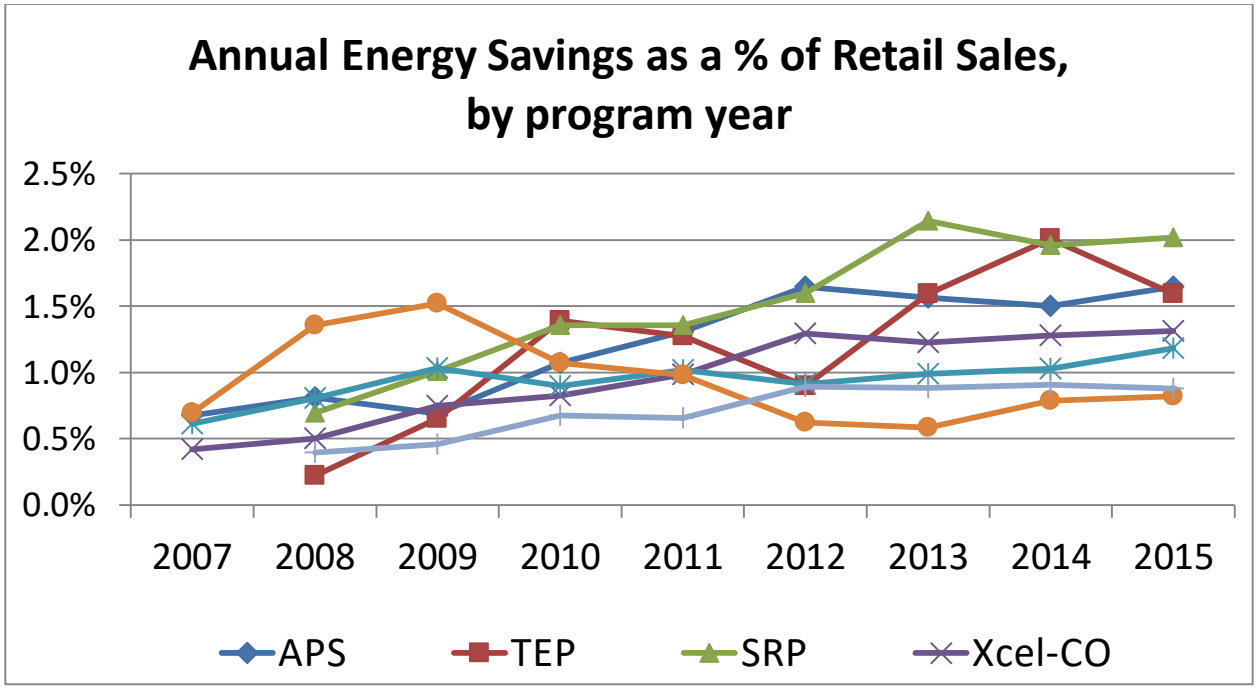
- Electric utilities in the region helped their customers save about 2,400 gigawatt hours (GWh) per year from energy efficiency programs implemented in 2016 alone, equivalent to the electricity use of 230,000 typical households.
- Electric utility energy efficiency programs implemented in 2016 will provide households and businesses about $750 million in net economic benefits, while also reducing CO_2 emissions by millions of tons and water consumption by billions of gallons.
- All seven major electric utilities in the region were above the national average savings percentage as of 2016, which was approximately 0.7 percent of retail electricity sales.
- Utilities in the region are implementing innovative energy efficiency programs based on recommendations provided by SWEEP, including industrial strategic energy management and energy manager co-funding programs.
- 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 2016, the majority of new construction in the region is occurring in jurisdictions that have adopted a state-of-the-art building energy code.
- Commercial building benchmarking and disclosure policies advanced in the region in 2016, most notably with Denver adopting a new benchmarking/disclosure requirement.
- The market for electric vehicles is growing rapidly in the Southwest, due in part to policies that SWEEP advocated. In 2016, Colorado, Nevada, Arizona and Utah were among the top ten states with respect to the fastest growing EV markets.

UTILITY PROGRAM

In 2016, SWEEP advocated for increased funding for and energy savings from utility demand-side management (DSM) programs in all 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 all electric utilities in the region spent around $400 million on DSM programs in 2016, up slightly relative to spending in 2015.

The energy savings achieved by electric utilities in the region in aggregate also increased. The chart below shows the energy savings achieved by the seven 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 to 2.0 percent of their electricity sales in 2016. Two other major utilities –Xcel Energy-CO and Rocky Mountain Power (RMP) – saved between 1.0 to-1.5 percent of sales from their 2016 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 in the region were above the national average savings percentage as of 2016 which was approximately 0.7 percent of retail electricity sales.

Energy Savings Achieved by Major Electric Utilities in the Southwest (savings as a percentage of retail sales)



The utilities in the region are helping their customers save hundreds of millions of dollars through DSM programs implemented each year. We estimate that households and businesses in the region will realize about $750 million in net economic benefits over the lifetime of energy efficiency measures installed as a result of electric utility DSM programs in 2016.

In 2016, SWEEP produced a new set of state DSM fact sheets as well as an overview paper on the impacts of utility energy efficiency programs implemented in the Southwest during 2008-15. These fact sheets and overview paper show that the major utilities in the region have achieved over $5 billion in net economic benefits for their customers while at the same time cutting CO_2 emissions by 60 million metric tons as a result of DSM programs during this time period. The fact sheets and paper are being used to educate policy makers and other stakeholders on the broad benefits of sustained and well-funded utility energy efficiency programs.

Arizona

Electric utilities in Arizona spent about $125 million on energy efficiency programs in 2016. According to the American Council for an Energy Efficiency Economy (ACEEE), Arizona continues to be a leading state in the nation (outside of New England) with respect to energy savings achievement from electric utility programs.

In 2016, 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. In particular, we influenced dockets where TEP and APS received approval to expand their energy efficiency programs, with the Arizona Corporate Commission (ACC) approving numerous new efficiency measures and program strategies recommended by SWEEP. In addition, SWEEP worked with the commissioners to establish new peak demand reduction targets for APS and TEP, and to initiate a proceeding to consider improving cost effectiveness analysis for energy efficiency technologies and programs.

SWEEP was a very active participant in rate cases for APS, TEP and UNS Electric in 2016. In these cases, we opposed proposals by the utilities to raise the monthly fixed charge, adopt mandatory residential peak demand charges, to eliminate tiered energy rates, and to lower the volumetric energy charge paid by residential and small business customers. We also worked with other allies to develop public opposition to the utilities' proposals. In both the UNS Electric and TEP cases, we successfully fended off mandatory peak demand charges as well as a very large increase in the monthly fixed charge. As of June 2017, we were waiting for the APS case to be decided.

SWEEP also worked in 2016 to improve utility Integrated Resource Plans in Arizona. We participated in, and helped organize, workshops; and we prepared 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.

Colorado

SWEEP provided advice to Xcel Energy and Black Hills Energy as these two investor-owned utilities implemented their DSM programs in 2016. Both utilities surpassed their 2016 energy savings goals, in part by ramping up more innovative programs involving support for LED lighting, mid-stream incentives, highly efficient new home construction, and high-efficiency air conditioning,

SWEEP provided recommendations to Xcel Energy for its 2017-18 DSM plan, some of which were included in the plan the utility filed in June. We then actively participated in settlement negotiations, which culminated in an unopposed Settlement Agreement recommending that the Colorado Public Utilities Commission (PUC) approve the new DSM plan. The Settlement Agreement includes a number of program enhancements recommended by SWEEP, as well as higher energy savings targets for the two-year plan relative to the minimum savings goals previously established by the PUC.

SWEEP also actively participated in a rate case that Xcel Energy filed in 2016. In the case, we opposed a new grid use charge (another form of monthly fixed charge); opposed movement towards peak demand charges for residential customers; and attempted to strengthen the modest inclining block rates that now exist for residential customers. We filed extensive testimony in the case but decided to not participate in a Settlement Agreement, which allows Xcel to move forward a peak demand charge pilot program. The PUC ultimately approved the Settlement Agreement that includes a time-of-use (TOU) energy rate pilot (which we supported), as well as the peak demand charge pilot. We were successful in helping to stop the adoption of the grid use charge.

SWEEP further began to work on two other cases with Xcel Energy in 2016: one regarding decoupling, which Xcel has proposed implementing for its residential and small business customers in the state; and a second regarding Xcel's proposal to implement smart meters (AMI) for all its customers along with distribution system voltage optimization. The latter is something we support as it will result in energy savings for customers.

Nevada

In 2016, SWEEP worked to influence a new three-year DSM Plan for Sierra Pacific Power Company in northern Nevada. We then participated in the docket where the Public Utilities Commission of Nevada reviewed and approved the new DSM Plan. The Plan calls for some expansion of the utility's DSM budgets during 2017-19. SWEEP entered into a Settlement

Agreement with NV Energy and the PUCN Staff on this DSM plan, which was approved by the Commission.

SWEEP worked quite intensively in 2016 to build support for new policies that would facilitate future growth of utility energy efficiency programs in Nevada. The policies include specific energy savings goals for NV Energy; valuation of non-energy benefits in DSM program cost-benefit analysis; review of cost effectiveness at the plan level rather than program level; dedicated utility funding for energy efficiency programs targeted to low-income consumers; and clarification that the PUCN has the authority to adopt decoupling.

We also successfully convinced an Energy Policy Task Force set up by Governor Brian Sandoval to support most of these policies; and we conducted considerable outreach and coalition building to develop support for these proposals. Most of these policies were adopted by the state legislature in 2017.

In addition, SWEEP helped convince the PUCN to open a rulemaking to revisit the issue of including a residential lighting program in the DSM portfolios of Nevada Power and Sierra Pacific Power. This cost-effective program was previously eliminated, over the objections of SWEEP and NV Energy. The PUCN decided to open this rulemaking in early 2017, and we are hopeful that a residential lighting program promoting LED lamps will be reinstated in 2018.

New Mexico

In New Mexico, SWEEP advised Public Service Company of New Mexico (PNM) as it developed a new 2017 DSM Plan. A number of our recommendations were accepted by PNM and included in the plan, such as expanding savings targets for LED lights, increasing incentives for high efficiency cooling equipment, adding Wi-Fi-enabled smart thermostats to programs, and restarting a second refrigerator pick-up and recycling program. SWEEP subsequently prepared testimony on the plan, which was filed by the Coalition for Clean Affordable Energy (CCAE). Our testimony includes recommendations on a shareholder incentive mechanism as well as program design. Following the submittal of testimony, we negotiated a Settlement Agreement on the DSM Plan with PNM and the Staff of the Public Regulation Commission. The Settlement Agreement includes a modified version of our shareholder incentive mechanism. The Settlement Agreement was approved by the New Mexico PRC.

SWEEP also provided feedback and program recommendations to two smaller utilities in New Mexico: Southwestern Public Service Company (SPS), a subsidiary of Xcel Energy, and El Paso Electric Company. Both utilities also have filed their 2017 DSM Plans and once again we were involved in the dockets where the plans, along with shareholder incentive mechanisms, were reviewed and approved by the PRC. In all of these cases, we advocated sliding scale incentive

mechanisms that reward the utilities for achieving more energy savings than is projected in their plans. We succeeded in achieving this outcome for all of the utilities.

SWEEP worked on a PNM rate case during the grant period, too. In this case, we supported the decoupling proposal made by PNM but opposed the large increase in the monthly fixed charge proposed by PNM. SWEEP assisted clean energy coalition allies with their testimony and worked behind the scenes to build outside support for our positions. The Hearing Examiner in the case recommended that the PRC approve only a small increase in the fixed charge, but did not approve decoupling. The PRC supported the Hearing Examiner's recommendation.

Utah

Rocky Mountain Power (RMP), a subsidiary of PacifiCorp, is the only 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 2016. We provided advice and comments as RMP revised its some of its efficiency programs for residential customers, as well as its small business direct-installation program.

RMP ramped up its energy efficiency programs in 2016. This was due in large part to PacifiCorp's 2015 Integrated Resource Plan (IRP), which called for increased energy savings as it was shown to be the least-cost energy resource. We advised RMP as they developed revised programs including suggesting new energy efficiency measures and modified program strategies.

SWEEP also engaged on DSM policy in 2016, including expressing support for a new policy that lets RMP treat its DSM programs as a capital investment with a return on investment, rather than as an expense with annual cost recovery through a utility bill surcharge (tariff rider). This policy, which was proposed by RMP and approved by the Utah legislature, helps to make DSM more financially attractive to the utility. The new policy went into effect in January, 2017.

In addition, SWEEP and UCE supported and provided recommendations concerning the energy efficiency programs of Questar Gas Company, the large gas distribution utility in Utah. Questar Gas continued to offer well-funded and effective energy efficiency programs for all of its customers in 2016, and is the leading utility with respect to natural gas efficiency programs in the Southwest.

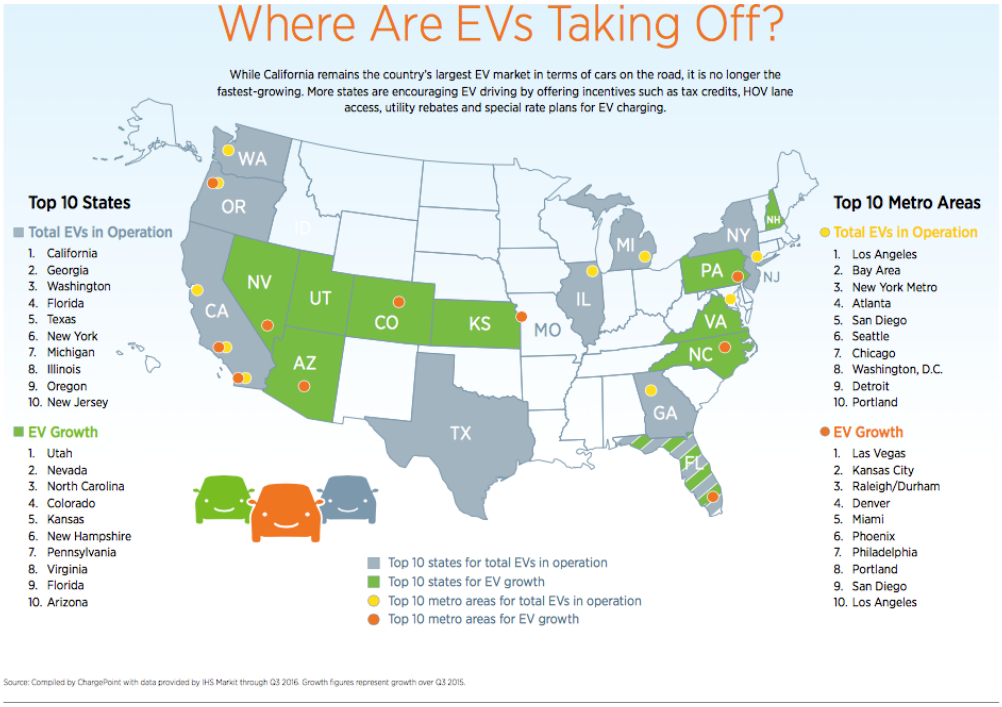
TRANSPORTATION PROGRAM

Electric Vehicle Policy

During 2016, SWEEP worked to: 1) advance electric vehicle (EV) tax credit policies in Colorado and Utah; 2) promote EV group purchase programs both in the Southwest and nationally; 3)

support utility engagement on EVs in the southwestern states; 4) get EV-ready building codes adopted by municipalities; 5) build support for an expanded fast-charging network; 6) build support for EV investments from funds the states will receive from the Volkswagen emissions cheating settlement; 7) advance bus electrification in Colorado and New Mexico; and 7) support local government EV efforts.

This work has helped to make the Southwest an EV success story. Colorado and Utah, the two states where we have had been most active, are each in the top ten states for EV market share. During 2016, Colorado was 6th and Utah 8th in EV market share. And a recent report from Chargepoint identified the states with the fastest growing EV markets in 2016 with Utah #1, Nevada #2, Colorado #4 and Arizona #10; and the fastest growing metro areas included Las Vegas #1, Denver #4 and Phoenix #6.



Colorado Tax Credit

For the last two years, SWEEP has been advocating changes to Colorado's EV tax credit – simplifying the credit to a flat amount that auto dealers and consumers can understand, and making the credit assignable, allowing buyers to assign it and take the credit as a discount off the purchase price. Both of these ideas were included in HB 16-1332, which went into effect on January 1, 2017. We believe that this will make the tax credit a more powerful tool for stimulating EV adoption. The Washington Post and Time Magazine reported this as making Colorado the best place in the nation to buy an EV. We have done follow up to encourage the

state to make administrative rules that can work for the auto financing agencies, and to encourage financing agencies to participate.

Utah Tax Credit

In Utah, we worked to advance a multi-year extension of the $1,500 EV tax credit. This was dropped as part of budget negotiations on the last day of the legislative session; since then SWEEP has been working with a coalition of EV stakeholders to build support for an extension in 2017. This was taken up by legislators and approved by the interim transportation committee as a committee bill for the 2017 session. SWEEP also provided input on the EV portion of the Sustainable Transportation and Energy Plan (STEP) legislation that was adopted, and worked with RMP on the proposal that was submitted to the Utah PSC.

Innovative Group Purchase Programs

SWEEP completed a case study of the nation's first EV group purchase programs, and completed a handbook for other communities on how to organize these programs. SWEEP worked with the Electrification Coalition on organizing a webinar with over 100 registrants on how to organize these programs, presented at the EV Roadmap conference, and have provided advice to multiple communities across the country. Within the SWEEP region, Aurora, CO, Boulder County, CO, Salt Lake City, UT and Northern Colorado held programs in spring 2016, and Las Vegas, NM and Phoenix, AZ are in the planning stages. Other programs inspired by our work have taken place in Kansas City, Minnesota, Massachusetts and Rhode Island, Ohio, Oregon, Texas, Washington, D.C. and other states.

Utility EV Policy

In 2016, SWEEP published a paper on how and why utilities can support the EV market. A shortened version was published in the *Electricity Journal*. SWEEP provided advice to RMP on how to implement the $2 million per year in EV charging authorized by the Utah STEP legislation. SWEEP is exploring the potential for policy changes to allow rate-basing of charging infrastructure, and to require utilities to develop EV plans in Colorado, New Mexico, and Nevada. SWEEP submitted comments in the PUCN investigatory docket on EVs, and raised the issue of how Xcel Energy's proposed rates would affect EVs in the rate case that took place in 2016.

EV-Friendly Building Codes

SWEEP proposed EV-ready code language for the Denver building code update. The residential portion was adopted by the city council. SWEEP has also been providing advice to Salt Lake City on how to better focus and strengthen their EV parking ordinance. SWEEP provided advice to the City of Aspen, CO, which adopted code requirements in late 2016, and to the City of Boulder, CO, which has incorporated this into the draft code update that was approved in early 2017. SWEEP also proposed that the Denver Regional Council of Governments hold a workshop

on how local governments can support EVs. Over 15 local governments attended, and SWEEP was one of the presenters on EV friendly building codes and group purchasing programs.

Fast-Charging Corridors

SWEEP proposed that a study be conducted on the business model and appropriate locations for fast charging to support EV adoption in the Denver metro area as well as in Colorado statewide. This study has been funded by the state energy office and the Regional Air Quality Council. SWEEP and the National Renewable Energy Laboratory (NREL) are partnering to conduct the study.

SWEEP proposed that Nevada, Utah, and Colorado join together to electrify the highway corridors joining their states. We worked with the Energy Office in each state to advance the idea, which led to a joint announcement by Governors Gary Herbert, John Hickenlooper and Brian Sandoval that EV charging infrastructure will be deployed on the major highway corridors in the three states.

VW Settlement

In 2016, SWEEP worked to shape state approaches to allocating the environmental mitigation funds they will receive from VW. In Colorado, we brought together a broad coalition of advocates, including rural electric utilities, to support a proposal allocating 15 percent of funds to the light-duty charging network and 85 percent for transit electrification. We have advocated for similar allocations in New Mexico, Arizona, Utah and Nevada. We also assisted both Colorado and Nevada in preparing applications for the first tranche (portion) of the VW Zero Emissions Vehicle Investment fund.

Transit Electrification

SWEEP advocated that the Denver Regional Transportation District (RTD) pursue additional electric buses beyond the 16th Street Mall shuttle. RTD has agreed to pursue electric vehicles for their highest ridership routes, and now says that it would like to convert all urban routes to electric buses. SWEEP also recommended that Albuquerque, NM, purchase electric buses for the city's planned Bus Rapid Transit service, and the city agreed to do so. Finally, we worked with partners to submit comments to the U.S. Department of Justice on how the VW Settlement could be modified to better support electric buses.

Transportation Funding, Planning, and Pricing

During 2016, there were several attempts to cut funding for public transit in Colorado, divert funds to new highway expansion, and create new revenue streams that would be largely devoted to highways. SWEEP led a successful coalition effort to stop these from moving forward. One involved a proposed ballot issue, proposed by the Colorado Contractors Association (CCA), to raise $700 million annually for highways. SWEEP mobilized enough opposition that CCA

withdrew the proposal, and is now in discussions about how to structure a ballot issue for a future year that would get support from SWEEP and other opponents of the 2016 efforts.

SWEEP released a study in 2016, conducted in collaboration with COPIRG, which for the first time quantifies the gap in funding for public transit and bicycle and pedestrian infrastructure in Colorado, which was estimated to be approximately $1 billion annually. We are using this study to reframe the transportation funding discussion in the state. The report received significant media coverage, including in the Denver Post and Colorado Public Radio. We are also using the report to argue that a significant percentage of any new transportation revenue should go to transit and bicycle and pedestrian infrastructure, as well as to support removing legislative restrictions on the use of the state share of the gasoline tax.

Finally, SWEEP submitted comments to the U.S. Department of Transportation on proposed new federal performance standards. One set of comments sought improvements in how the U.S. DOT would measure congestion, while the other supported the establishment of greenhouse gas (GHG) emissions performance standards for state DOTs and metropolitan planning organizations. We worked with multiple local governments and state agencies to obtain comments supporting the GHG standard. The policies that we advocated were included in the final standards issued by the Obama Administration.

BUILDINGS PROGRAM

Building Energy Code Advocacy and Support

During 2016, SWEEP worked with stakeholders in the region to move states, cities and counties forward with the adoption and implementation of the 2012 or 2015 International Energy Conservation Code (IECC). We spoke on the benefit of the IECC for the economy, environment and the communities. SWEEP was active in a number of stakeholder groups including ICC chapters, code development committees, energy code collaborations, and workshops held and sponsored by the SWEEP buildings team.

In Arizona, the cities of Paradise Valley, Chandler and Scottsdale adopted the 2015 IECC. Approximately 71 percent of construction activity in Arizona occurs in communities that have adopted either the 2012 or 2015 IECC. SWEEP also coordinated with the SRP, TEP and with APS on their energy code initiatives.

In Colorado, we worked with Denver to finalize adoption of the 2015 IECC in 2016. The adoption in Denver was important because of percentage of new construction starts that occur in the city. We also worked with other communities to adopt the 2015 IECC including Boulder County, Parker, Centennial, Golden, Longmont, Avon, and Vail. Approximately 60 percent of

construction activity in Colorado occurs in communities that have adopted either the 2012 or 2015 IECC.

SWEEP participated in a commercial code compliance study sponsored by the Colorado Energy Office. We analyzed commercial building construction data for Colorado, provided advice and feedback on strategy and methodology and helped with the development of the deployment plan.

In Nevada, SWEEP focused its efforts on the City of Reno, which adopted the 2012 IECC in 2016, as did Washoe County in northern Nevada. SWEEP also worked with the state energy office to sponsor energy code trainings and distribute code guide books developed in 2015 by SWEEP and state stakeholders. In addition, we expanded our reach for building efficiency to the Nevada Rural Electric Association and the state Distributed Generation Technical Advisory Committee to the Governor's New Energy Industry Task Force (NEITF) to retain energy efficiency as a priority in Nevada.

In New Mexico, SWEEP encouraged the state Construction Industry Division (CID) to begin the process of updating the statewide building energy conservation codes. SWEEP met with key state stakeholders and the local ICC chapter to move New Mexico forward to the newer energy codes. We have also encouraged other groups, including the Santa Fe Area Home Builders and Albuquerque's 2030 District, to push for an energy code update.

In Utah, SWEEP and its partner Utah Clean Energy were instrumental in keeping efficiency standards when Utah adopted the 2015 IECC statewide. The 2015 IECC commercial building provisions were adopted without amendments, but the residential provisions were amended including a six-year code update cycle. The new statewide code was adopted in 2016 with new requirements phasing in starting in 2017 and full implementation in 2021.

Beyond Energy Codes Policies and Programs

In 2016, the City and County of Denver passed a new benchmarking and transparency ordinance to improve the energy efficiency of commercial and multi-family buildings in Denver by 10 percent by the end of 2020, and double that amount in the following decade. The new ordinance, called Energize Denver, applies to commercial and multifamily buildings over 25,000 square feet.

SWEEP was active in advising the City and County of Denver throughout the ordinance development process by providing direction to stakeholders on policies, practices, and procedures to make the ordinance as strong and effective as possible. We served on the Quality Assurance Working Group to develop recommendations for audits, retro-commissioning, and retrofits as well as the benchmarking data itself, and we were invited to participate in the Benchmarking Implementation Advisory Group. In addition, SWEEP published an article on the

benefits of benchmarking and transparency to commercial building owners.

SWEEP continued to work with utilities in the region to improve data access so that building owners can more easily benchmark, measure, manage, and track energy performance — especially in cases where there are multiple tenants in a commercial building or mixed-use property. In 2016, SWEEP communicated to PNM about the importance of retrieving commercial building energy use data easily. PNM now offers easy access to building energy use data to facilitate building owners tracking and analyzing energy performance. PNM also now aligns with Xcel Energy, Rocky Mountain Power, and Questar Gas Company in offering customers easy access to energy use data.

In 2016, SWEEP surveyed multifamily building owners and managers regarding how to make benchmarking work well for their properties. The survey gleaned the benefits, best practices, and barriers in benchmarking for this sector, in particular looking at how to extract and increase the value of benchmarking beyond just "clicking a button" to submit data. We also investigated how the U.S. Housing Urban Development's proposed benchmarking rules for publicly-funded properties would affect multifamily property owners, managers, and tenants. We drafted case studies on a low-income multifamily building retrofit one-stop-shop program and on the multifamily building code compliance methodology, as well as a series of recommendations and best practices. These materials were incorporated into a report published in conjunction with the other regional energy efficiency organizations.

Finally, SWEEP expanded its support for zero net energy (ZNE) buildings in 2016. SWEEP urged utilities in the region to support ZNE residential and commercial construction through utility DSM programs, and we encouraged the Albuquerque 2030 District to undertake a ZNE pilot program. We also began developing training workshops on the construction of ZNE commercial and residential buildings, which took place in the first half of 2017.

INDUSTRIAL PROGRAM

Promoting Best Practices in Utility Industrial Energy Efficiency Programs

In 2016, SWEEP focused on promoting implementation of utility strategic energy management (SEM) and energy project manager (EPM) co-funding programs with the large electric utilities in the region. One of our utilities, Rocky Mountain Power, is already a leader in implementing these types of programs, but other utilities in the region have been lagging.

SWEEP organized and held two webinars for utilities in our region on SEM. The first one provided an overview of SEM programs, including their benefits to utilities and customers, how they are implemented, and how energy savings are measured. The second webinar, held in April,

focused on energy project manager (EPM) co-funding programs, which can be a helpful complement to SEM programs. EPM programs help companies and facilities overcome the common obstacle of not having enough staff time (and training) devoted to energy management.

SWEEP also directly encouraged utilities in our region to undertake SEM and EPM programs. As result of our advocacy, PNM is implementing a pilot EPM program in 2017. In addition, NV Energy agreed to launch a pilot EPM program in 2017 in both its Northern (with several large mining customers) and Southern (Las Vegas area) territories. We will discuss these pilots with PNM and NV Energy over the next year and provide assistance as needed.

SWEEP also provided recommendations to Xcel Energy, encouraging the utility to launch of EPM co-funding and SEM cohort training pilot programs. (SEM training can be provided to companies individually, or in groups/cohorts of about10 to 12 companies.) Based on our recommendations, Xcel agreed to implement pilot programs in 2017-18. In addition, Xcel will start measuring and counting energy savings from operations and maintenance (O&M) actions by industrial customers through its "energy information systems" program, which was another SWEEP recommendation.

Removing Obstacles to Combined Heat and Power

Xcel Energy Recycled Energy Tariff

In 2016, Xcel Energy submitted a new proposed tariff for facilities with waste-heat-to-power or "recycled energy" (RE) systems, as part of Xcel's new renewable energy plan. The Colorado PUC ordered this new tariff after a 2015 proceeding that involved this tariff. SWEEP, partnering with Western Resource Advocates (WRA), provided comments and participated in settlement discussions with Xcel Energy over the new proposed RE tariff, as part of the 2016 Xcel Energy General Rate Case.

WRA and SWEEP succeeded in getting most of what we recommended in the final RE tariff. The major changes we requested, and for which we achieved approval, include: a) leases of RE systems are also allowed in addition to customer-owned systems; b) two weeks of "grace energy" (for forced outages) and four weeks of planned maintenance are now specified, and the generation and transmission monthly charges are reduced by 67 percent from Xcel's original proposal; c) fluctuations in RE system output of up to 20 percent are allowed and do not count against the grace energy, as long as they occur outside of peak hours; and d) Xcel will purchase any excess energy from RE systems, up to 120 percent of on-site energy needs, at 4.3 cents/kWh. For excess energy more than 120 percent of on-site needs, the customer can negotiate a power purchase agreement (PPA) with Xcel or sell to another wholesale provider (and pay wheeling charges).

The result of the changes is that the tariff will be less costly for facilities that implement RE systems, and the tariff and incentives will be available to applications such as natural gas compressor stations, for which the RE system would generate significantly more electricity than needed on-site. The Settlement Agreement in the rate case was approved by the Colorado PUC.

Outreach to Promote Recycled Energy in Colorado

Following up on the new Xcel Energy RE tariff (described above), SWEEP partnered with the Colorado Energy Office (CEO) to develop a plan for promoting RE to Xcel Energy customers and throughout Colorado. The plan includes a webinar on recycled energy planned for early 2017 as well as direct outreach and through working with Recycled Energy project developers.

Distributed Generation Interconnection Standard in AZ

Arizona is one of only about a dozen states without interconnection standards. Standardized interconnection rules provide clear and uniform processes and technical requirements for safely connecting combined heat and power (CHP) and other distributed energy systems to the electric utility grid. A streamlined interconnection process reduces uncertainty, prevents delays, and ensures that the requirements are appropriate for the size, scope, and technology of systems under consideration. The absence of enforceable interconnection rules in Arizona has made it difficult for CHP projects to progress, as they have faced a patchwork of utility-by-utility requirements and procedures that were time consuming, costly, and confusing.

Following up on our work in 2015 on this issue, we participated in a technical workshop on Distributed Generation (DG) interconnection organized by the Arizona Corporation Commission. SWEEP also participated in subsequent discussions with commission staff and the two main regulated utilities, Arizona Public Service and Tucson Electric Power. We will continue to participate in the process, and we are optimistic the ACC will finalize the DG interconnection standards sometime in 2017.

Networking and Training Programs for Industrial Customers

Industrial Networks in Colorado and Utah

SWEEP continued to work directly with industrial companies through the Colorado and Utah Industrial Energy Challenge programs. In Colorado, SWEEP organized and led three well-attended industrial networking meetings in 2016. Several companies are pursuing projects as a result of discussions at these meetings. In coordination with the Colorado Energy Office, we recognized three industrial facilities for outstanding energy efficiency achievements in 2016: Rocky Mountain Metal Container, Medtronic, and IBM Boulder. From 2013-2015, these two facilities achieved combined energy savings of 98,000 MMBtu per year, resulting in cost savings of approximately $590,000 per year.

SWEEP's partner Utah Clean Energy (UCE) facilitated two industrial networking meetings in Utah in 2016, and also held a compressed air system training workshop. UCE and Utah Office of Energy Development recognized three entities for outstanding achievements in industrial energy efficiency in 2016: Futura Industries, Holcim, and Jordan Valley Water Conservancy District.

Wastewater Treatment Webinars

SWEEP worked with the Midwest Energy Efficiency Alliance to organize and deliver two webinars for wastewater treatment plants in 2016. The first of the two webinars focused on energy efficiency opportunities, and the second on CHP opportunities. Both webinars were well-received, with 56 participants for the first webinar and 32 participants for the second one. The presentations and recordings for both webinars are also available here: Energy Efficiency Opportunities in Wastewater Treatment Plants; Combined Heat and Power Opportunities in Wastewater Treatment Plants

COMMUNICATIONS

SWEEP Blog

SWEEP's Livewire

SWEEP debuted a blog, *Livewire*, early in 2016 and staff immediately began using it. SWEEP published 19 blogs in 2016 on topics covering all of our areas of focus. SWEEP emails our blog to more than 2,700 stakeholders and media, and most of our blogs are picked up by the online news distribution organization, *Energy Central*. We also promote SWEEP blogs via social media. The SWEEP blog greatly enhanced our ability to educate our target audience and argue our positions. Our blogs enjoy a higher-than average click-rate to links and have increased traffic to our website.

State and National Campaigns

SWEEP communications worked with our staff, state representatives and advocacy organizations to support initiatives in our Utility, Buildings and Transportation programs. Our communications promoted staff reports, legislation and policy positions, and news that resulted from our outreach efforts. We also promoted news shared by other regional energy efficiency organizations (REEOs). We used social media to bring our reports and news to a larger audience and increase the number of website visitors and readers of our news and reports. In total, we stimulated 30 significant press stories (in print, radio or TV) on our work in 2016.
For details, see http://www.swenergy.org/press-coverage/archive.

Utilities

Communications wrote an article in *Public Utilities Fortnightly* on the overall impacts of utility EE programs in the Southwest. Another article appeared in *Utility Dive* that was based upon our report of rural electric co-op energy efficiency programs. We also placed an article promoting utility incentives for industrial energy efficiency in *Energy Manager Today* and *Facilities Manager*, and another article in *Green Builder* magazine on energy codes. In addition, SWEEP authored a positive article about Xcel Energy's new LED streetlight retrofit program for *Public Utilities Fortnightly*.

SWEEP earned media coverage in the states where we work, too. In Nevada, SWEEP generated press, radio and TV coverage of the controversial decision by the state's PUC to trim NV Energy's proposed funding increase in its energy efficiency program in southern Nevada, including a *Las Vegas Sun* editorial opinion that shared our viewpoint. Communications also supported Arizona's retention of its energy efficiency renewable standard (EERS) by placing an article in the *Arizona Capitol Times*, and we provided comment for other media stories on energy efficiency.

Buildings

In Arizona, SWEEP communications placed a guest opinion in the *Arizona Republic* in support of retaining municipal control over building energy codes. In Utah, communications generated significant radio and press coverage in support of 2015 codes, and helped plan an educational event for legislative stakeholders who voted on adoption of the 2015 building energy codes. Our partner, Utah Clean Energy, further placed an opinion piece in support of 2015 codes in the *Deseret News*. In Colorado, SWEEP communications provided outreach support for buildings conferences and helped to develop an awards program for cities that adopt recent versions of building energy codes.

Transportation

Communications supported SWEEP's legislative effort to support electric vehicle purchases through a revised tax incentive. This topic received significant national and Colorado media coverage. We also generated significant press coverage of potential use of VW settlement funds to boost electric vehicle use. Communications promoted two new transportation reports with good results:

- **How Leading Utilities Are Embracing Electric Vehicles.** A summary of this report was published in *The Electricity Journal*, a utility industry trade publication. It was also picked up by online electric vehicle publications and was the subject of a series in *Utility Dive*, an online industry magazine.

- **Evaluation of Colorado Electric Vehicle Group Purchase Programs.** This report received national and EV industry media coverage in more than 24 unique publications that resulted in many inquiries. SWEEP's transportation department decided to host a webinar to meet demand for information. The successful webinar had 110 registrants and 94 people in attendance.

SWEEP Website

SWEEP worked with Resource Media to collect photos that show energy efficiency in action. The photos will be available on our website for reporters to use. Reporters often confuse solar energy with energy efficiency, and we hope the photo library will provide them with accurate imagery to use with media stories. SWEEP has worked with our web designer to help us track page views and downloads of our content.

PUCN's Paul Thomsen switches to LEDs

Social Media

SWEEP significantly increased its social media presence and following in 2016. As of the end of 2016, we had over 1,700 Twitter followers and over 430 Facebook followers and have a Klout score above 48, the highest it has been and at par or higher than our sister REEOs. We saw increased engagement with our posts in 2016.

OTHER ACTIVITIES

SWEEP held its ***Thirteenth Annual Southwest Utility Energy Efficiency Workshop*** in Las Vegas, NV in 2016. The workshop provided a forum for discussion of the latest trends and emerging themes in utility DSM programs in the region. The 2016 workshop also featured presentations on enhancing DSM programs using smart meter data, residential retrofit through the neighborhood blitz approach, retrofitting multifamily properties using an ESCO approach, promoting heat pump water heaters, and other innovative program approaches. Presentations from the 2016 workshop are available at http://www.swenergy.org/regional-workshop-2016

SWEEP continued its partnership with the U.S. Department of Energy and other regional energy efficiency organizations (REEOs) in 2016. 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.

SWEEP continued to expand its Allies Program in 2016. The program involves solicitation of financial support from energy efficiency businesses and other organizations that support SWEEP's mission. The Allies Program, launched in 2014, had 35 participants at the end of 2016.

PUBLICATIONS

The following reports were published in 2016 and are available on the SWEEP web site: http://www.swenergy.org/publications

Multifamily Energy Efficiency Retrofits: Barriers and Opportunities for Deep Energy Savings. Regional Energy Efficiency Organizations. Dec. 2016.

D. Katz, W. Toor, M. Salisbury. **Colorado's Transit, Biking & Walking Needs Over The Next 25 Years.** Aug. 2016.

The Electric Vehicle and Photovoltaic Power Purchase Handbook: A toolkit for developing electric vehicle and rooftop solar group purchase programs. March 2016.

M. Salisbury and W. Toor. **Evaluation of Colorado Electric Vehicle Group Purchase Programs.** February 2016.

M. Salisbury and W. Toor. **How Leading Utilities Are Embracing Electric Vehicles.** February 2016.

Adam Bickford and H. Geller. **Review of Leading Rural Electric Cooperative Energy Efficiency Programs.** Jan. 2016.

SUPPORTERS

SWEEP is grateful for the financial support it received from the following organizations in 2016:

Anonymous Foundation
Boulder, Colorado
Denver, Colorado
Denver Foundation
Colorado Energy Office
Edwards Mother Earth Foundation
Energy Foundation
Heising-Simons Foundation
U.S. Department of Energy
U.S. Environmental Protection Agency
Arizona Public Service Company
Black Hills Energy
New Mexico Gas Company
NV Energy
Public Service Company of New Mexico
Rocky Mountain Power
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. See the SWEEP Allies list here.

STAFF AND STATE REPRESENTATIVES (June 2017)

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
Kirsten Frysinger, Operations Director
Penelope Purdy, Director of Communications
Adam Bickford, Senior Associate Utility Program
Mike Salisbury, Senior Associate Transportation Program
Ellen Zuckerman, Senior Associate Utility Program
Nancy Kellogg, Program Associate Buildings Program
Jeff Schlegel, Arizona Representative
Tammy Fiebelkorn, New Mexico Representative
Tom Polikalas, Nevada Representative
Kevin Emerson, Mitalee Gupta and Sarah Wright, Utah Representatives