



2017 Annual Report

HIGHLIGHTS

Energy efficiency continued to be a priority for utilities, states and localities in the Southwest in 2017, thanks in part to the efforts of SWEEP. Highlights include:

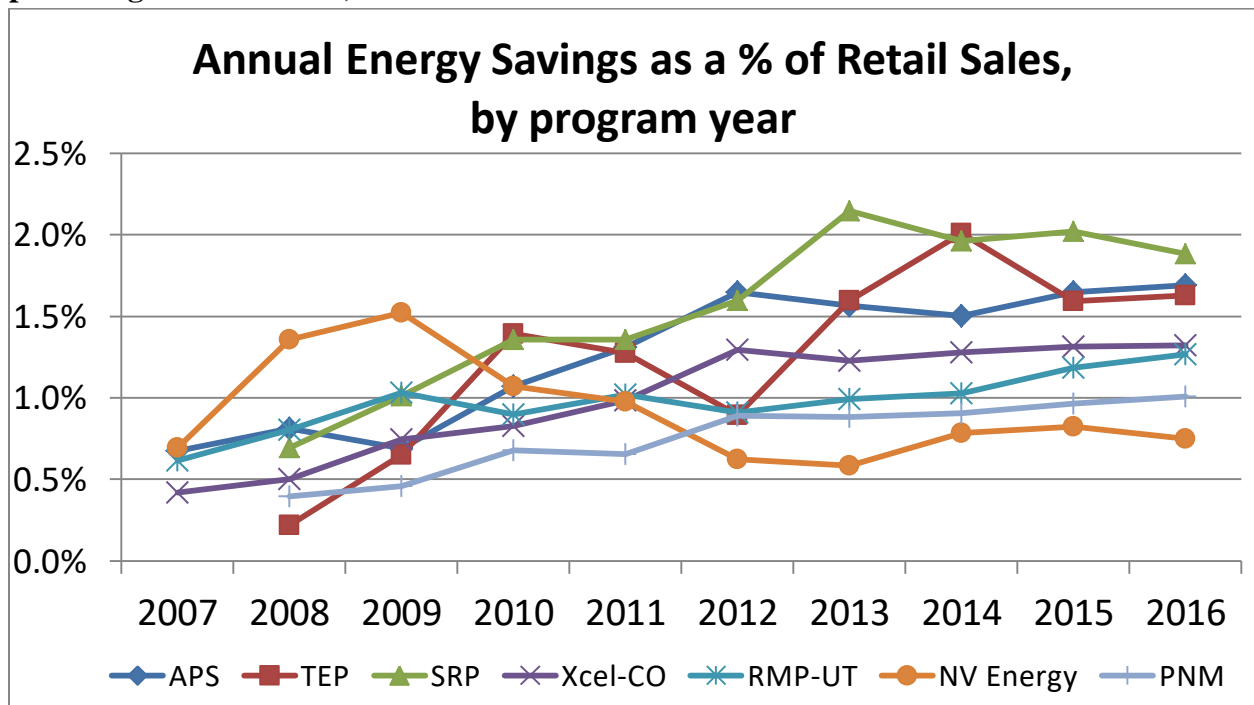
- Electric utilities in the Southwest helped their customers save about 2,400 gigawatt hours (GWh) per year from energy efficiency programs implemented in 2017, equivalent to the electricity use of 230,000 typical households in the region.
- Electric utility energy efficiency programs implemented in 2017 will provide households and businesses about \$800 million in net economic benefits, while also reducing CO₂ emissions by approximately 1.6 million of tons over the lifetime of the energy efficiency measures installed in 2017.
- New legislation approved in 2017 will lead to an expansion of utility energy efficiency programs in Nevada and Colorado.
- With support from SWEEP, states, cities and counties continued to adopt the 2015 version of International Energy Conservation Code (IECC). As of 2017, 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 2017, most notably with Salt Lake City 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 2017, Colorado, Nevada, Arizona and Utah were among the top ten states with respect to the fastest growing EV markets.
- Eight states in the region adopted an agreement to install EV charging stations on all major interstate highway corridors, a concept advocated by SWEEP.
- Due in part to the efforts of SWEEP, states in the region are devoting a large fraction of VW Settlement funds to EV charging infrastructure and public transit electrification.

UTILITY PROGRAM

SWEEP advocated for increased funding for and energy savings from utility demand-side management (DSM) programs in all of our states in 2017. 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 \$385 million on DSM programs in 2017.

The energy savings achieved by electric utilities in the region in general is increasing. 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 decade. 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 as of 2016. Two

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



other major utilities –Xcel Energy-CO and Rocky Mountain Power (RMP) – saved around 1.3 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. Preliminary energy savings results for 2017 indicate that most of the major utilities either maintained or increased their energy savings in 2017 relative to 2016.

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 \$800 million in net economic benefits over the lifetime of energy efficiency measures installed through utility energy efficiency programs in 2017. In addition, there will be around 1.6 million metric tons of avoided CO₂ emissions over the lifetime of energy efficiency measures installed in 2017.

Arizona

Electric utilities in Arizona spent about \$120 million on energy efficiency programs in 2017. 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 2017, 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. SWEEP also worked intensively to try to prevent funding cuts for both APS's and TEP's energy efficiency programs. Funding cuts were proposed by either the utility or ACC staff. SWEEP helped to mobilize opposition to the proposed funding cuts from businesses, consumer advocates and local officials. The outcome on these efforts is still pending. SWEEP also advised SRP during the grant period and was successful in convincing SRP to increase funding for its energy efficiency programs for its 2018 fiscal year which began in May, 2017.

SWEEP was a very active participant in rate cases for APS and TEP in 2017. 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 the TEP case, we successfully fended off mandatory peak demand charges as well as a very large increase in the monthly fixed charge.

SWEEP also worked to improve utility Integrated Resource Plans in Arizona. We participated in, and helped organize workshops on the subject; 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. And we began to work on [responses to IRPs](#) submitted to the ACC by APS and TEP, which greatly undervalue the contribution that energy efficiency resources can and should make in the post-2020 period. This work involves in-depth analysis and preparation of alternative resource plans

that include much greater levels of energy efficiency and renewable energy compared to the resource plans proposed by the utilities.

Colorado

Electric utilities in Colorado spent about \$110 million on energy efficiency and other DSM programs in 2017. SWEEP provided advice to Xcel Energy (the largest electric utility in the state) as it implemented its DSM programs. Xcel Energy's [2017 DSM Annual Report](#) showed that the company exceeded the energy savings goal set by the Colorado PUC, in part by ramping up more innovative programs involving support for LED lighting, mid-stream incentives, and highly efficient new home construction.

SWEEP began working on a DSM Strategic Issues docket for Xcel Energy during 2017. This docket addresses changes to energy savings goals, the shareholder incentive mechanism, cost effectiveness analysis methodology, non-energy benefits adders and other policy issues affecting Xcel's future DSM programs. Xcel proposed lowering its energy savings goals starting in 2019 and SWEEP made a strong case for higher goals in [testimony](#) submitted in Dec. 2017. This docket will conclude in May or June, 2018, and we expect it will result in an increase in the energy savings goals for Xcel's energy efficiency programs starting in 2019.

SWEEP worked on two other important dockets with Xcel Energy in 2017: one regarding decoupling, which Xcel 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. We were successful in both dockets. The Colorado PUC approved decoupling which will start for Xcel Energy in 2018, thereby reforming the utility's business model in a way that supports increased energy efficiency. The PUC also approved the AMI and distribution voltage optimization proposals. The latter will result in 1.5% or greater energy savings for the customers located on the distribution feeders where voltage optimization is going to be implemented.

In July, Governor Hickenlooper issued an [Executive Order](#) that set economy-wide and electricity sector goals for reducing carbon pollution in Colorado. The Executive Order also includes a goal of increasing the energy efficiency of electricity use in the state by 2% per year starting in 2020.

Last but not least, SWEEP spearheaded an effort to educate policy makers about the importance of updating key [energy efficiency legislation](#) that was adopted in Colorado in 2007. The update, approved by the legislature in 2017, requires that the PUC adopt energy savings goals for investor-owned electric utilities for an additional ten years.

Nevada

Electric utilities in Nevada (i.e., NV Energy) spent \$50 million on energy efficiency and other DSM programs in 2017. Energy savings increased to over 260 GWh per year, more than a 15% increase compared to energy savings from 2016 programs.

SWEEP worked intensively in 2017 to develop and build support for new policies that would facilitate future growth of utility energy efficiency programs in Nevada. The policies include: 1) directing the PUCN to adopt energy savings goals for NV Energy; 2) valuation of non-energy benefits in DSM program cost-benefit analysis; 3) review of cost effectiveness at the plan level rather than program level; 4) dedicated utility funding for energy efficiency programs targeted to low-income consumers; and 5) clarification that the PUCN has the authority to adopt decoupling. The good news is that all of these policies were included in [legislation](#) adopted by the Nevada legislature in 2017 and signed into law by Governor Brian Sandoval.

In the second half of 2017, SWEEP worked on a rulemaking opened by the PUCN to implement new regulations in response to the legislation. We submitted detailed comments and participated in workshops, together with WRA and NRDC. We are optimistic that the rulemaking will conclude with the PUCN adopting reasonable energy savings goals and other new policies in line with the legislation, which in turn will lead to a significant scaling up of NV Energy's energy efficiency programs starting in 2019.

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. We are hopeful that a residential lighting program promoting LED lamps will be reinstated in 2019 as part of a scaled up set of utility DSM programs.

New Mexico

Electric utilities in New Mexico spent about \$40 million on energy efficiency and other DSM programs in 2017. Electric utilities in New Mexico are directed by state law to spend 3% of sales revenues on DSM programs.

In 2017, SWEEP advised Public Service Company of New Mexico (PNM) as it developed its new 2018-19 DSM Plan. A number of our recommendations were accepted by PNM and included in the plan, such as expanding savings targets for LED lights and adding Wi-Fi-enabled smart thermostats to programs. In the course of the docket that got underway once the new DSM plan was filed, SWEEP negotiated a [Settlement Agreement](#) with PNM and the Staff of the Public Regulation Commission. The Settlement Agreement includes further enhancements to energy efficiency programs recommended by SWEEP as well as an improved shareholder

incentive mechanism. The improved mechanism provides additional reward to PNM if they achieve superior energy savings for their customers. The Settlement Agreement was approved for the most part by the New Mexico PRC in January, 2018.

SWEEP also began working on new legislation for advancing utility energy efficiency efforts in New Mexico in the post-2020 time frame in late 2017. Our initial proposal includes a new EERS for the post-2020 time period, adoption of decoupling (which PNM supports), and some other new or revised policies. We began to discuss the concept with key allies and PNM. Our idea is to bring forward this proposal in the 2019 legislative session.

Utah and Wyoming

Rocky Mountain Power (RMP), a subsidiary of PacifiCorp, is the only investor-owned electric utility in Utah and the largest IOU in Wyoming. 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 2017. We provided advice and comments as RMP revised many of its efficiency programs for residential and business customers.

RMP spent about \$65 million on energy efficiency and other DSM programs in Utah and Wyoming in 2017. Energy savings increased in both states in 2017, relative to energy savings in 2016, and surpassed the energy savings goals established by the utility.

Dominion Gas Company (formerly Questar Gas Co.) spent about \$22 million on its energy efficiency programs in Utah in 2017. Dominion helped its customers save about 900,000 Dekatherms of gas per year from its 2017 programs, making it the leading gas company in the region with respect to achieved energy savings.

SWEEP and UCE provided comments and feedback regarding the Integrated Resource Plan issued in April, 2017 by PacifiCorp. The IRP is influencing energy efficiency budgets and savings targets in 2018 and beyond, and it called for significantly reduced energy savings targets in Utah starting in 2018 due mainly to reduced load growth projections. On the other hand, the IRP called for increased energy savings targets in Wyoming.

After the IRP was issued, SWEEP and UCE undertook a campaign aimed at convincing RMP not propose a reduction in energy savings goals in Utah in 2018 in spite of the results of the IRP. This campaign included developing citizen and business pressure as well as media outreach. The campaign was partially successful—in November RMP filed a 2018 DSM budget without any reduction compared to 2017. In addition, the energy savings goals for 2018 were moderately reduced compared to those for 2017, rather than greatly reduced as was called for by the IRP.

TRANSPORTATION PROGRAM

Accelerating the Penetration of Electric Vehicles

The VW Settlement

Our work in this area has been focused on bringing together advocates in each state to advocate that VW funds allocated by the states be focused on light duty EV charging infrastructure up to the 15% maximum allowed by the terms of the settlement, and to advocate for a focus on public transit electrification with the remaining 85%.

In Colorado, we organized a broad coalition effort that brought many diverse voices to the stakeholder process, had continued behind the scenes discussions with decision makers, and organized a large turnout of electrification supporters for the public hearing on the [draft plan](#). The plan reflected most of the elements that we proposed including the full 15% for light duty charging, as well as substantial funding for electric transit buses and school buses. [The final plan](#) was released in March 2018, with no any substantive changes from the draft plan. In addition, in April, 2017 VW [chose Denver](#) as one of the 11 metropolitan areas where they will focus investment from the first tranche of the national ZEV investment fund. SWEEP assisted the Colorado Energy Office in preparing the application to VW.

In Nevada, we have worked with partners to provide public comment to the NV Department of Motor Vehicles task force. The task force released a [draft plan](#) that includes the full 15% for charging. In addition, VW will invest ZEV investment funds on fast charging on highway corridors linking Las Vegas and Reno to California. SWEEP worked with partners to provide additional comment after the draft was out, advocating for a stronger focus on electrification of public transit.

In Utah, we provided analytical support to supporters on a taskforce convened by the Utah Department of Environmental Quality. DEQ thought that the funding from Rocky Mountain Power for EV charging meant that VW funds were not needed for this purpose; we provided analysis demonstrating that the RMP funding would meet less than 20% of the total need. The taskforce recommended 11% for EV charging. We met with DEQ, coordinated with multiple groups to argue for a greater focus on electrification, and submitted joint comments with Utah Clean Energy. The plan will be released at the end of March, 2018. We believe that it will include the full 15% for charging, but do not know how it will treat heavy duty electrification.

In Arizona, we worked with a set of stakeholders including APS, SRP and GM to develop a joint position statement supporting the full 15% for EV charging, and a focus on medium and heavy duty electrification.

In New Mexico, we worked with partners including PNM to argue both for a more robust public input process and for a focus on electrification. The public comment heavily favored electrification. However, the ongoing difficulty with the startup of the Albuquerque BRT service, which uses BYD electric buses, poses a challenge.

Electric highway corridors

The Governors of Colorado, Utah and Nevada [announced](#) in late December of 2016 that they will work together to build a regional electric vehicle charging network on interstate highways I-15, I-25, I-70, I-76, and I-80. This came about after two years of advocacy by SWEEP of Governor Hickenlooper, and with the energy offices in each state. Following the initial announcement, SWEEP facilitated conversations about including New Mexico. We then worked closely with Colorado Governor Hickenlooper's office on the rollout of the expanded [8-state REV West MOU](#), which was built on the original 3 state MOU. This MOU commits the states to work together to electrify all of the interstate highway corridors connecting the states.

In 2017, we completed a [fast charging study](#) in collaboration with the City of Denver, the National Renewable Energy Lab, and the Regional Air Quality Council (RAQC). This study has been influential as the state planned how to allocate VW settlement funds, and as the state energy office develops RFPs for fast charging along corridors. In addition, the state energy office and state DOT have confirmed that they plan to shift several million dollars of [Alternative Fuels Colorado](#) funding from CNG stations to fast charging along highway corridors, something that SWEEP has been advocating for two years.

Colorado EV utility policy

Our highest priority effort was a [policy proposal](#) to allow utilities to rate base investments in EV charging, whether through utility owned charging stations or customer incentives for charging, and to require each regulated utility to develop a plan to accelerate transportation electrification and submit it to the PUC for approval. This idea was taken up by the legislature with bipartisan sponsorship and passed the state house, but was defeated in the state senate. In the latter part of 2017 we worked with a broad coalition of stakeholders to build more support for this policy in 2018.

We also briefed individual PUC commissioners on EV policy, which led to the PUC opening an informational docket on transportation electrification. In December, SWEEP presented at the [initial workshop](#). The workshop was very successful, and two of the three

commissioners signaled strong support for utility involvement in electrification.

Xcel also initiated the nation's first large [utility sponsored EV group purchase program](#) in the spring of 2017. Over 500 vehicles were sold through the program.

Utah EV tax credits and utility incentives

Our proposal to both extend the Utah EV tax credits through 2021 and make the tax credits assignable so that they could function like a point of sale incentive were embodied in [legislation](#) that passed its committee votes but was defeated by one vote on the House floor, with significant opposition from Americans For Prosperity. In fall of 2017, we worked with a number of legislators on the potential to bring this proposal back in 2018, by joining it with a registration fee on EVs.

It is worth noting that we also had to defend against an attempt to roll back the Colorado tax credit. We were successful in Colorado, but just as in Utah, the opposition to EVs was driven by Americans For Prosperity. The New York Times [covered](#) this new phenomenon of active opposition to state EV policy coming from Koch-funded organizations.

Our second priority in Utah was to support the adoption of a well-designed set of rebates and incentives for electric vehicle charging stations by Rocky Mountain Power as it implements the STEP legislation. We provided advice to RMP but had a number of concerns with the company's initial proposal, including rebate levels that we believed were too low to spur investment in charging, and a lack of attention to charging in multifamily housing. SWEEP intervened in the docket in cooperation with Utah Clean Energy, and most of our suggestions were incorporated into a Settlement Agreement. The Utah PSC [approved](#) the Settlement in June.

Nevada EV Policy

With the outcome of the 2016 election, Nevada became a more fertile ground for EV policy work. SWEEP supported [SB 145](#), which passed in 2017 and was signed into law. The legislation requires utilities to submit plans to the PUCN showing how they will invest in charging stations and other infrastructure for electric cars. The legislation also instructs the PUCN to direct utilities to support customer adoption of electric vehicles. This bill set the stage for NV Energy to take larger steps to support transportation electrification.

SWEEP collaborated with NRDC, the Sierra Club and WRA to provide comments to the Nevada PUC on the rulemaking to implement SB145. This set the stage for NV Energy to submit a transportation electrification plan in 2018.

Municipal Engagement

In March, Boulder, CO adopted new EV-friendly code requirements for both [residential](#) and [commercial](#) properties, after SWEEP urged them to include these in an energy code update. Denver is starting a process to extend EV-friendly code requirements to multifamily housing, based on analysis by SWEEP of the barriers to charging in multifamily residences. In addition, Salt Lake City is considering a major strengthening to EV-friendly requirements for multifamily housing.

In March, Boulder County, CO announced the first local government in the Southwest to offer [personal electric vehicle advising](#), as part of its Energy Smart advising service. The program will help residents learn about financial incentives, and what types of electric vehicles (EVs) best match their personal driving habits, as well as help in identifying their charging opportunities. SWEEP had recommended the program in a [2015 analysis](#) of steps that the city of Boulder and Boulder County could take to increase EV adoption.

We saw significant action on EV group purchase programs in southwestern states in 2017. Fort Collins and Boulder County held repeat programs, as did the Salt Lake City area. Xcel Energy in Colorado and Salt River Power in Arizona organized utility-led programs. Phoenix and Colorado Springs are in the planning stages. Nonprofits in Durango, CO and Garfield County also organized successful programs. SWEEP's [handbook](#), [case study](#) and webinars have been major drivers of these programs nationwide.

SWEEP has been participating in the development of Denver's 80x50 climate plan, and served on the committee developing the transportation section including advocating for strong transportation electrification policies. The [draft plan](#) incorporated EV goals calling for 80% of all light duty vehicles and 100% of all ridesharing vehicles be electrified by 2050. SWEEP is asking that these goals be strengthened in the final document by moving the target year to an earlier year, or creating interim goals for 2020-2030.

SWEEP also had significant engagement with transit agencies in 2017, working with multiple agencies to support bus electrification. This led to transit agencies weighing in with state regulators to support VW funding allocations for electric buses. This should lead to agencies applying for these funds in 2018 after state VW plans are approved.

Colorado EV Plan

After President Trump withdrew from the Paris Climate Accords, we worked with a coalition of organizations to encourage Governor Hickenlooper to issue an Executive Order on climate, and to encourage him to include transportation electrification in the order. In July, the Governor issued an [Executive Order](#) that set economy-wide and electricity sector goals for reducing carbon pollution in Colorado, set meaningful policies for reducing emissions from

the two most polluting sectors (electricity generation and transportation) and committed to joining the U.S. Climate Alliance, a network of states committed to achieving the Paris climate goals.

The Executive Order includes a section that directs state agencies to develop a statewide Electric vehicle plan by January 2018. SWEEP worked with the Colorado Energy Office on developing the plan – providing early input to CEO on what areas to cover, and reviewing drafts and providing edits before the plan went out for public comment. This helped ensure that the plan includes both detailed implementation steps and some ambitious goals. The plan was released in early 2018.

Perhaps the most important goal in the plan is to go from about 13,000 EVs in Colorado at the end of 2017 to 940,000 by 2030. This shift would save Colorado consumers over \$500 million per year in fuel costs. It also would also drive down electricity rates, saving utility customers an estimated \$50 million per year. Other goals outlined in the plan include:

- Coordinate efforts with other Mountain West states to make regional travel with an EV convenient;
- Develop partnerships with electric utilities to support deployment and greater utilization of fast chargers;
- Go from 36 electric transit vehicles in 2017 to 500 by 2030; and
- More than triple the number of EVs in the state fleet by 2020.

SWEEP provided input during the development of the plan, and looks forward to working with the state on the policies, programs and investments that will be needed to achieve these goals.

Smart Growth Transportation Planning

Our biggest focus in 2017 was to ensure that public transit and bicycle and pedestrian infrastructure were a central component of any major transportation funding legislation or ballot issue in Colorado. Transportation emerged as the defining issue of the legislative session in 2017, with commitments from the Democratic Speaker of the House and the Republican Senate President to jointly sponsor an effort to increase transportation funding. We were very concerned that this might be just focused on expanding highways, and we worked with key partners to avoid this outcome.

We worked with the coalition including CoPIRG, Bicycle Colorado, the Colorado Association of Transit Agencies, LiveWell Colorado, and Conservation Colorado, as well as the Metropolitan Mayors' Caucus. We were also able to come to agreement on principles with key

business groups including The Denver Metro Chamber of Commerce and the Colorado Contractor's Association. We worked with multiple [local elected officials](#) to show that rural and urban areas across the state wanted a multimodal transportation system, not just bigger highways.

This effort was quite successful, and the bill that ended up being introduced [reflected all of our priorities](#). A very broad coalition supported the effort, but the bill was ultimately [defeated](#) in a senate committee.

Throughout the fall, we worked with the Denver Metro Chamber of Commerce, the Metropolitan Mayors' Coalition and other coalition partners on a proposed citizen initiative for 2018. The proposal is based on the bill we worked on in the spring, with the same elements – creation of a new state fund for public transit, bicycle and pedestrian infrastructure, and shared mobility; totally flexible funds (can be used for transit, roads, bike/ped or shared mobility) for local governments, and funding for the state DOT. The Metro Chamber will ultimately make the call whether they are ready to raise \$5 million + for a ballot campaign; our focus has been assuring that the proposal contains good policy.

We also made significant progress in 2017 on Bus Rapid Transit (BRT) in the Denver area. Our top two priorities were the development of BRT along Colfax Avenue in Denver and SH 119 in Boulder County. The Regional Transportation District has launched an EIS for SH 119, and the City of Denver has committed to funding Colfax BRT through a 2017 [bond measure](#) backed by local property taxes. The bond measure passed overwhelmingly. In addition, Denver has revisited their plans, and is proposing a much higher quality center-running BRT line. We are also advocating that the state DOT share of the proposed statewide ballot issue contain funding for the top 5 BRT lines in the planning stages in Colorado.

In January, 2017, the board of directors of the Denver Regional Council of Governments adopted [Metro Vision 2040](#), a long-range plan for land use and transportation in the Denver metropolitan area. The final plan includes targets of a 10 percent reduction in per capita driving and a 60 percent reduction in per capita greenhouse gas emissions from transportation. SWEEP served on the advisory committee for developing Metro Vision 2040 and advocated for strong sustainability goals.

We also completed a [white paper](#) on I-25 in the Denver area. This is a road that was expanded to 10 lanes in 2006, and was congested again by 2010. Because of the development around it, it is almost impossible to expand the road again. Meanwhile, the opening of HOT lanes and BRT service on north I 25 and US 36 is showing people that there is an alternative that works. Politically, this opens up the possibility of public support for converting existing lanes on south I-25 to HOT lanes, and directing the revenue to transit and transportation demand

management in the corridor. Our strategy is to use this to open up a much broader conversation about using congestion pricing as an alternative to highway expansion in multiple locations.

Supporting New Innovations

We made progress on a number of fronts in 2017. The Mobility Choice Blueprint group is now formally in place, with funding committed, and has chosen a consulting firm to do the scenario planning work. We also convened an informal group of legislators and experts to discuss autonomous vehicle (AV) policy, and how we can drive AVs towards being shared and electrified. In addition, SWEEP convened a group of national policy experts in October to discuss state level policy to drive AVs towards a shared, electrified future, and we are using this as the basis for a white paper to be released in 2018.

Linking Transportation to Climate Policy

Our main focus in 2017 was to advocate that Colorado consider adoption of the California advanced clean car standards, including the Zero Emissions Vehicle (ZEV) mandate. We have legal analysis that indicates that this could be done administratively, through a rulemaking at the state Air Quality Control Commission (AQCC). We met with the Governor and his staff, and they are interested in this as a potential step that Colorado can take in response to the Trump Administration's rollbacks of climate policies.

Our work has brought together a coalition of groups to work on this, with Conservation Colorado, EDF, and NRDC playing leading roles. A number of funders are providing initial funding to support groups working on this effort. Governor Hickenlooper has indicated that Colorado will consider adopting the clean car standards if there is a federal rollback. The AQCC began formal discussion of the standard at the November meeting. The Governor will decide in 2018 whether to pursue a rulemaking during his last year in office.

BUILDINGS PROGRAM

Building Energy Code Advocacy and Support

SWEEP worked with stakeholders in the region to move states, cities and counties forward with the [adoption and implementation of the 2015 International Energy Conservation Code \(IECC\)](#). We communicated the benefits of the code for the environment and economy. SWEEP was active in a number of stakeholder groups to achieve these goals including International Code Council (ICC) chapters, state code development committees, national ICC

committees, Architecture 2030 districts and benchmarking technical review committee.

We facilitated quarterly meetings of the Colorado and Nevada Energy Code Compliance Collaboratives. In Colorado, SWEEP worked to obtain funding for energy code training from Xcel Energy. Xcel Energy doubled its support for energy code training and education to \$50,000 per year for 2017-2018. The training and education is provided by energy code experts at Colorado Code Consulting. SWEEP meets with the contractors quarterly at a minimum, and advises on any necessary changes or adaptations to make sure the trainings are as targeted and effective as possible.

In Colorado, 25 jurisdictions have so far adopted the 2015 IECC, including the high-construction areas of Denver, Aurora, Boulder County, Broomfield, Centennial, Longmont, Parker, Pueblo County, and Vail. The City of Boulder, Colorado has put its residential energy code on a path to net zero: all new or renovated homes over 5,000 square feet have to be net zero and smaller houses will meet net zero requirements over time. Its commercial code is 30% more efficient than ASHRAE 90.1. We continue to work with other jurisdictions to advance adoption of the 2015 IECC including Lakewood, Lone Tree, Colorado Springs, Jefferson County, El Paso County and Mesa County/Grand Junction.

The State of Arizona now has 70 percent of all new construction occurring in municipalities who have adopted the 2012 or 2015 IECC. We continue to work with other jurisdictions to advance adoption of the 2015 IECC including Phoenix, Peoria, Pinal County and the City of Apache Junction. In addition, some communities that skipped the adoption of the 2015 IECC are considering approving the 2018 IECC instead. The 2018 IECC was released in September 2017.

We worked with the Nevada Governor's Office of Energy and the utilities NV Energy and Southwest Gas to provide training across the state on the 2018 IECC as the state is on track to advance to the 2018 IECC. Public hearings started in October 2017 with a planned adoption date of January 2018 and an implementation date of July 1, 2018. SWEEP worked alongside the energy office staff for coordinating trainings, participating in the process to select the energy code trainer and working with utilities to provide funding for the trainings sponsored by the state.

We also worked with communities in Northern Nevada to advance their codes. Since the state was still on the 2012 IECC in 2017, Carson City and Sparks joined Reno and Washoe County in adopting the 2012 IECC. We continue to work with other municipalities in this area of the state to advance their energy codes.

In addition, we wrote articles on the [benefits of energy codes](#) and provided trainings in our region on energy code requirements and benefits. We spoke on webinars and panels on these

benefits and coordinated conference sessions and presentations on the environmental and economic benefits of the 2015 IECC.

Benchmarking, Transparency and Data Access

In August, Salt Lake City adopted a [commercial building benchmarking ordinance](#). SWEEP submitted comments in support of the ordinance, and our partner Utah Clean Energy was actively engaged in supporting its approval. The ordinance is phased-in over several years starting with municipal facilities in 2018 and large private buildings in 2019 or 2020, depending on the size. The policy increases market transparency by making it easier for prospective business tenants and real estate investors to identify which buildings in Salt Lake City are among the most energy efficient. Beginning in 2020 buildings that are less efficient than the national average will be required to investigate energy “tune-ups” every 5 years, though implementation of the tune-ups remains voluntary.

To help facilitate commercial building benchmarking, PNM in New Mexico has proposed data access in its 2018 Electric Energy Efficiency and Load Management Program Plan. Automated whole-building energy data will be accessible for buildings with four or more tenants where no one tenant uses more than 50% of the load (aligning with the region’s default standard). The data access policy is in conjunction with a voluntary benchmarking program. SWEEP’s comments on PNM’s DSM plan included several recommendations to improve the energy data access policy.

SWEEP also worked with other cities in the Southwest that are considering adopting benchmarking and transparency ordinances including Fort Collins and Aspen in Colorado and Reno, NV. In addition, we served on Denver’s Benchmarking Advisory Group to make its ordinance launch and implementation as smooth as possible. The focus now is on increasing compliance rates, designing the information transparency component (maps, data, scorecards).

Other Building Energy Efficiency Policies and Programs

SWEEP helped to educate and inform key stakeholders across the region on the benefits of PACE financing in 2017. Counties must opt into the commercial PACE program in Colorado in order for properties to be eligible to participate. Four additional counties opted in during the first quarter of 2017, bringing the total number of counties participating in commercial PACE up to 15.

SWEEP is also striving to advance R-PACE in Colorado and is also under consideration when a request for authorization to program administrators to explore R-PACE models in Colorado. The approving board has identified two financial institutions to proceed with when the

Board decides to move forward with R-PACE.

SWEEP's partner Utah Clean Energy continued to promote Utah's commercial PACE program in 2017. In addition, Utah Clean Energy provided technical review of proposed changes to Utah's C-PACE statute, which were designed to enable simpler participation for local governments in C-PACE projects. A bill was signed into law in 2017 that allows assignable liens to third parties and the creation of a statewide C-PACE district that removes the county administration overhead for the program.

SWEEP encouraged utilities in the region to implement multifamily building programs in 2017, and advised them on program design. In Colorado, Xcel Energy concluded a pilot program and launched a full scale multifamily building retrofit program in 2017. Likewise, RMP developed and analyzed a multifamily program that launched in early 2018 in Utah. In addition, PNM expanded its multifamily housing program in 2017.

SWEEP supported Zero Net Energy (ZNE) building efforts in three southwestern states in 2017 by facilitating [training for the residential and commercial building sectors](#). Residential trainings were provided in Arizona, Colorado and Utah. Commercial trainings were provided in Colorado and Utah. We worked with partners where possible to coordinate and host the trainings. SWEEP also worked on convincing utilities in the region to increase their support for ZNE buildings within their new construction incentive programs. And SWEEP began assembling a [data base on ZNE buildings](#) in the region.

Finally, SWEEP initiated a study of the economic feasibility of electric heat pumps in homes in the Southwest, starting with data collection and research on programs in the region. The study is also examining the potential for GHG emissions reductions by shifting from natural gas heating to heat pumps, considering the carbon intensity of electric generation today as well as projected carbon intensity over the next ten years.

INDUSTRIAL PROGRAM

SWEEP's industrial energy efficiency efforts in 2017 included:

- Encouraging utilities in the Southwest to adopt best practice energy efficiency programs for industrial customers;
- Researching energy efficiency potential in cannabis production and developing recommendations for utility programs to promote energy efficiency for cannabis growers;
- Promoting industrial efficiency in CO and UT through voluntary networking meetings and recognition programs;

- Promoting waste heat to power (WHP) in Colorado, and
- Supporting the finalization of distributed generation (including solar and CHP) interconnection standards in Arizona.

Utility Industrial Energy Efficiency Programs

SWEEP provided input to several of our major utilities regarding [strategic energy management](#) (SEM) and energy manager co-funding programs in 2017. Xcel Energy has a program called Energy Information Systems (EIS), which is basically SEM offered to larger commercial and industrial customers on an individual basis (as opposed to through cohorts), with a strong component of energy monitoring and information systems, as the name implies. This program is going very well. In 2017, we encouraged Xcel to offer an SEM cohort program as well as an energy manager co-funding program, at least on a pilot basis. However, Xcel has not agreed to do this as of yet. One of the obstacles is allowing Xcel to claim energy savings from low-cost operations and maintenance (O&M) and behavioral measures, which would be a focus of a SEM cohort program.

To clarify this issue, SWEEP provided testimony in favor of Xcel being able to claim energy savings from O&M measures for large customers through the EIS or SEM programs, in the DSM Strategic Issues docket mentioned in the Utility Program section above. This new policy is expected to be approved when this docket concludes in 2018.

With urging from SWEEP, both Public Service Company of New Mexico (PNM) and NV Energy included pilot energy manager co-funding programs in their 2017 DSM plans. SWEEP also encouraged both utilities to include training in basic principles of SEM for the new energy managers. NV Energy is working with SWEEP on providing this training, which will take place in April, 2018.

In the case of PNM, the applications for energy manager assistance were disappointing, so in place of the energy manager co-funding program, PNM is developing another type of program, which they are calling “SEM Lite.” SWEEP will continue to collaborate with PNM on developing its SEM Lite offering in order to make it as helpful to large customers as possible. In addition, Salt River Project (SRP) is developing a new “SEM Lite” program that SWEEP will provide advice on.

SWEEP also prepared and disseminated a report on [industrial re-commissioning](#) programs in 2017. These programs help industrial customers save energy and money through low-cost improvements to common industrial energy systems such as compressed air, pumping, process cooling, and refrigeration. Customers can often save 10-20 percent of the energy

consumption of the systems targeted. Our report reviews six existing programs and provides a set of recommendations for utilities that are interested in implementing this type of energy efficiency program.

Cannabis Research and Report

Colorado and Nevada legalized the recreational use of marijuana in 2012 and 2016, respectively. New Mexico and Arizona also allow the use of marijuana for medical uses. Cannabis cultivation is an energy intensive sector, about 10 times as intensive per square foot as commercial offices, and now accounting for about 1% of Colorado's total electricity consumption.

In 2017, SWEEP researched best practices in energy efficiency for cannabis grow operations and utility programs serving this sector. We then issued a report on the topic titled [A Budding Opportunity: Energy Efficiency Best Practices for Cannabis Grow Facilities](#). The report indicates that medium-size or larger indoor grow operations can reduce their energy use per pound of output by 30-35% through implementing best practices in lighting, cooling and dehumidification. The report also highlights three utilities in the Northwest with strong cannabis energy efficiency programs, and provides recommendations for all utilities with cannabis grow customers, especially those in our region. These recommendations include:

- Utilities should reach out proactively to their cannabis customers and especially to newly permitted grow operations.
- Utilities should offer strong technical assistance on improved technologies/practices for lighting, cooling, and dehumidification.
- Utilities should offer incentives for more energy-efficient equipment; and also offer incentives for custom projects, making reasonable assumptions about what are the “standard practices” beyond which savings are measured.

Industrial Networking and Recognition Programs

In Colorado, SWEEP once again coordinated with the Colorado Energy Office (CEO) in 2017 to recognize leading industrial facilities for their energy efficiency achievements. The four companies or entities that were given [outstanding achievement awards](#) include Carestream Health, Corden Pharma, Keysight Technologies, and Boulder's wastewater treatment plant. Combined, these four entities reduced their energy costs in 2016 by \$340,000. In addition SWEEP led an industrial networking meeting that was hosted by IBM in Boulder.

In Utah, SWEEP's partner Utah Clean Energy, working with the Intermountain Industrial

Assessment Center and Utah Office of Energy Development, recognized the following companies or entities for their energy efficiency achievements in 2017: Bowie Resources, Frito-Lay, Hill Air Force Base and Houweling’s Group. These four entities achieved total savings in 2016 of 18.7 million kWh, representing annual cost savings of \$1.2 million.

Waste Heat to Power Outreach

With partial funding from the Colorado Energy Office, SWEEP provided outreach to industrial facilities in Colorado that are prospects for waste heat to power (WHP) projects. As part of this work, SWEEP developed and distributed a brochure on the benefits of WHP systems. We also worked with Xcel Energy to provide clear and accurate information about its incentives for WHP on its “Recycled Energy” website. We identified a few Colorado companies interested in obtaining free screenings of WHP through the Southwest CHP Technical Assistance Partnership, and facilitated the beginning of the screening process. Unfortunately, none of these prospects followed through to complete the screening or to move on to a more detailed feasibility study.

Interconnection Standards

SWEEP continued to encourage the Arizona Corporation Commission to develop and issue statewide interconnection standards for distributed generation in 2017. We collaborated with our partner Western Resource Advocates (WRA) to submit comments on the Commission staff’s draft standards in October, 2017. We will continue to follow the progress of the Commission and to collaborate with WRA on any additional comments as the Commission moves towards finalizing the standards in 2018.

COMMUNICATIONS

All SWEEP programs successfully used communications to help achieve strategic goals in 2017. Usually, the programs and communications teams agreed to undertake direct media outreach. But in certain instances, SWEEP provided materials and drafts to our partners who then carried the message to the news media. In these cases we felt that press coverage or an op-ed would have more influence if it came from business or community leaders. One successful example was the Denver Post [op-ed on the need for improved transit funding](#) signed by the mayors of Aurora and Arvada, CO, which relied heavily on SWEEP’s data and analysis by SWEEP’s Transportation Program Director Will Toor.

By the Numbers: SWEEP Communications Results in 2017

- *Media stories, SWEEP Quoted: 31*
- *Media stories, SWEEP influenced: 11*
- *SWEEP opinions published: 2*
- *SWEEP opinions influenced: 9*
- *SWEEP blogs: 23*
- *News Releases: 18*
- *News Briefs: 52*
- *Technical reports edited: 10*
- *Facebook followers: 497*
- *LinkedIn followers: 150*
- *Klout Score: 60*
- *Twitter followers: 2,074*
- *Record Twitter engagements for one day: 11,102*



Press stories facilitated by and/or quoting SWEEP staff are available at <http://www.swenergy.org/press-coverage> and SWEEP blogposts at <http://www.swenergy.org/blog>.

For example, KTVN-Channel 2 in Reno interviewed SWEEP's Tom Polikalas about energy efficiency proposals for the then-upcoming Nevada legislature. As discussed elsewhere in this report, SWEEP scored significant victories last year in the Silver State. [See the news story here.](#)

The communications staff also set, and has begun reaching, its own targets including:

- **Expanding the use of illustrations, photos and graphics.** We have accomplished this goal and will continue to expand visual media because it greatly increases both traditional and social media engagements.
- **Making SWEEP materials more understandable.** SWEEP made progress in this regard, and plans to keep making its reports, news releases and other materials more readable. While this goal is most important when the target audience is the public or news media, SWEEP also strives to make its technical publications readable by, for example, encouraging our authors to organize their content clearly and to use active tense.

- **Increasing SWEEP’s online and social media presence.** We ensured that the RSS feed picks up our Regional News items; increased our Facebook following, and revived our LinkedIn page, all of which improved both our Klout score and search-engine optimization (SEO). Since many of SWEEP’s allies and supporters actively follow Twitter, we focused not only on expanding our follower numbers but also on improving engagement with each Tweet. We reached both Twitter targets but the work remains on-going because social media markets continue to evolve rapidly.

Program-focused Communications

Utilities

As noted earlier, the utilities program scored numerous successes in several states where SWEEP works. Our favorable, earned media included: 1) a lengthy Reno TV story about SWEEP and pending legislation to improve Nevada’s energy efficiency; 2) quotes by SWEEP in stories regarding utility energy efficiency program funding in Arizona, 3) an in-depth, SWEEP-authored article about how New Mexico can improve its energy efficiency programs; and 4) a Weather Channel story on energy efficiency and clean energy use (or lack of it) in Wyoming.

SWEEP also responded to unsolicited requests from media members who recognize our organization’s expertise; the communications director and the executive director often field calls from media outlets such as the Denver Post, and Denver Business Journal, while SWEEP’s state representatives frequently get requests from the Arizona Republic, as well as Nevada TV stations such as KOLO and KTVN. Many media stories directly quoted SWEEP, although other journalists used our information as background. Howard Geller’s blog, [New Facts Underscore How Much Energy Efficiency Benefits the Southwest](#), proved to be a popular online read.

During this grant period, SWEEP also continued to upgrade its website, news releases and other public materials. For example, we added new, eye-catching photos to our homepage, updated our Events page, added information from our annual workshop, upgraded the website “icons” used to illustrate and to link to our various programs, and, more specifically, improved the building team’s landing page.

Buildings

SWEEP revamped its buildings program [website page](#), adding photos, linking related programs to each other, and updating the content. The buildings and web teams also added sections for commercial energy efficiency information and a “tool kit” for metro Denver green building programs.

The buildings team produced five very readable, nicely illustrated blogs, one of which

was picked up and re-published by Green Builder online: [Energy Codes Are Life and Safety Codes](#). The buildings and communications teams also coordinated to promote SWEEP's co-sponsorship of events such as the 2017 Rocky Mountain Green Summit.

Transportation

The communications director worked actively with the transportation program in 2017, particularly because many states faced, or made, decisions about electric vehicles and funding for EV infrastructure (especially creation of public charging networks). The communications outreach included:

- 10 blogs;
- eight news releases;
- 11 regional news briefs;
- 25 news stories/ earned media; and
- six op-eds either written or supported by SWEEP.



Imagery helps draw readers into publications that they otherwise might not look at carefully – especially elected leaders who won't peruse the data but do make decisions about whether to hire SWEEP's expertise. This photo, showing of the difficulty of unclogging Denver's interstate traffic unless Colorado adds more public transit, is among the visual elements that we added to the transportation team's report on [Improving Mobility without Adding More Lanes](#).

Industry

In December 2017, the industrial program produced a report of special interest to the Southwest, where two states have legalized recreational cannabis and two others have approved medical marijuana. The study, [A Budding Opportunity](#), explained why cannabis grow facilities use so much energy and ways to improve their energy efficiency. Industrial program director Neil Kolwey also wrote a blog on the topic, [Getting into the Weeds](#).

Training

SWEEP's communications director partnered with Resource Media to present media training for all SWEEP staff in the summer of 2017. The session focused on ways to improve the use of online and social media to reach journalists and policy makers. The communications director also has participated in several free webinars provided by the Heising-Simons Foundation on an array of pertinent issues, such as how to boost readership of our reports and publications.

National Policy

The communications director worked with SWEEP's federal policy team to boost support for national energy efficiency programs that, in turn, promote regional efficiency. In particular, SWEEP worked to preserve funding for DOE energy efficiency R&D programs, low-income home weatherization, building codes and standards, and the federal ENERGY STAR programs. This work involved educating key members of the U.S. Congress about the benefits that the federal energy efficiency programs are having in our states.

SWEEP coordinated with national groups to maximize our reach, including work with other REEOs, ACEEE, NRDC and the Energy Efficiency Communicators Network. When appropriate, communications staff also consulted with the federal policy team to develop relevant media strategies and materials.

OTHER ACTIVITIES

SWEEP held its [Fourteenth Annual Southwest Utility Energy Efficiency Workshop](#) in Tempe, AZ in 2017. The workshop provided a forum for discussion of the latest trends and emerging themes in utility DSM programs in the region. The 2017 workshop also featured updates on the U.S. DOE and EPA energy efficiency programs, presentations on home energy assessments using smart meter data, strategies for promoting net zero energy homes, networked lighting controls, geo-blitzing direct installation for small business customers, grid edge voltage control, and more.

SWEEP continued its partnership with the U.S. Department of Energy and other regional energy efficiency organizations (REEOs) in 2017. With funding from DOE, all six REEOs worked within their regions in areas of mutual interest such as building code education and support, assistance to state and local governments, and advancing energy efficiency in the industrial sector.

SWEEP presented its [Leadership in Energy Efficiency Awards](#) to three individuals in 2017: Nevada State Senator Pat Spearman, Nevada State Assemblyman William McCurdy II, and Tim Hogan. Ms. Spearman and Mr. McCurdy were the sponsors of key energy efficiency legislation adopted in Nevada. Mr. Hogan, former Executive Director of the Arizona Center for Law in the Public Interest, provided legal representation for SWEEP before the Arizona Corporation Commission for the past 15 years.

SWEEP continued to expand its successful [Allies Program](#) in 2017. 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 36 participants at the end of 2017.

PUBLICATIONS

The following reports were published in 2017 and are available on the SWEEP web site at: <http://www.swenergy.org/publications>

N. Kolwey, **A Budding Opportunity: Energy Efficiency Best Practices for Cannabis Grow Facilities.** Dec. 2017.

M. Salisbury, W. Toor and T. Svitak. **Opportunities for Vehicle Electrification in the Denver Metro Area and Across Colorado.** August 2017.

A. Bickford and H. Geller. **Time-Sensitive Valuation of Electric Savings in the Southwest.** July 2017.

M. Salisbury and W. Toor. **Improving Mobility Without Building More Lanes.** July 2017.

M. Salisbury and W. Toor. **Managed Lanes and Other Strategies to Improve Mobility on the I-25 South Corridor.** June 2017.

N. Kolwey. **Industrial Re-commissioning: Not Just a Building Tune-up.** February 2017.

C. Brinker. **Top 9 Reason to Update to a Newer Energy Code.** February 2017.

SWEEP and Utah Clean Energy. **The Potential for Electric Vehicles to Reduce Vehicle Emissions and Provide Economic Benefits in the Wasatch Front.** January 2017.

SUPPORTERS

SWEEP is grateful for the financial support it received from the following organizations in 2017:

Anonymous Foundation	Black Hills Energy
Boulder County, Colorado	New Mexico Gas Company
Denver, Colorado	NV Energy
Denver Foundation	Public Service Company of New Mexico
Colorado Energy Office	Regional Air Quality Council
Edwards Mother Earth Foundation	Rocky Mountain Power
Energy Foundation	Questar Gas Company
Environmental Defense Fund	Salt River Project
Heising-Simons Foundation	Southwest Gas Company
Natural Resources Defense Council	Tucson Electric Power Company
U.S. Department of Energy	Xcel Energy
U.S. Environmental Protection Agency	El Paso Electric Company
Arizona Public Service Company	

In addition, SWEEP thanks its Allies for their financial support. See the [SWEEP Allies list here](#).

STAFF AND STATE REPRESENTATIVES (April 2018)

Howard Geller, Executive Director
 Justin Brant, Senior Associate Utility Program
 Christine Brinker, Senior Associate Buildings Program
 Matt Frommer, Senior Associate Transportation Program
 Kirsten Frysinger, Operations Director
 Nancy Kellogg, Program Associate Buildings Program
 Neil Kolwey, Industrial Program Director
 Jim Meyers, Buildings Program Director
 Penelope Purdy, Director of Communications
 Will Toor, Transportation Program Director
 Ellen Zuckerman, Senior Associate Utility Program
 Jeff Schlegel, Arizona Representative
 Tammy Fiebelkorn, New Mexico Representative
 Tom Polikalas, Nevada Representative
 Kevin Emerson and Sarah Wright, Utah Representatives