



December 11, 2018

Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

RE: Alliance for Industrial Efficiency Comments Regarding Arizona Public Service Company's Application for a Ruling Relating to its 2018 Demand Side Management Implementation Plan; ACC Docket No. E-01345A-17-0134

Dear Chairman Forese and Commissioners,

The Alliance for Industrial Efficiency (the "Alliance") appreciates the opportunity to comment on Arizona Public Service Company's (APS) pending 2018 Demand-Side Management (DSM) Plan. The Alliance is a diverse coalition that includes representatives from the business, contractor, labor, and academic communities. We represent trade associations with a strong presence in Arizona, such as the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA). SMACNA companies have been directly involved with a number of noteworthy development projects in Arizona, including the construction of the CyrusOne Phoenix Data Center in Chandler and the expansion of American Express' offices at Desert Ridge. Members of the Arizona Corporation Commission (the "Commission") had an opportunity to learn about these projects first hand at a business roundtable and tour organized by our members at the sheet metal training center in Phoenix last year.

We are committed to enhancing manufacturing competitiveness and reducing emissions through industrial energy efficiency, particularly through the use of clean and efficient power generating systems such as combined heat and power (CHP) and waste heat to power (WHP). The Alliance has been active on several energy efficiency issues in 2018, including weighing in on Commissioner Andy Tobin's *Energy Modernization Plan*,¹ supporting the standardization of Arizona's interconnection rules,² and providing recommendations on APS' and Tucson Electric Power's (TEP) integrated resource plans.³

We are writing now to express concern over APS' proposed plan to significantly weaken funding and drastically cut rebates and services for energy efficiency programs in the state, particularly for commercial and industrial (C&I) customers. We are particularly concerned about the potential impact of this proposed change on prospects for CHP deployment in the state, since CHP incentives are currently available under the affected programs. Further, we are concerned

¹ Alliance for Industrial Efficiency, Apr. 23, 2018, "Review, Modernization, and Expansion of the Arizona Energy Standards and Tariff Rules and Associated Rules" Docket No. E-00000Q-16-0289 (<http://images.edocket.azcc.gov/docketpdf/0000187735.pdf>).

² Alliance for Industrial Efficiency, Apr. 25, 2018, "In the Matter of the Notice of Proposed Rulemaking Regarding Interconnection of Distributed Generation Facilities," Docket Number RE-00000A-07-0609, (<http://docket.images.azcc.gov/0000187933.pdf>) and Alliance for Industrial Efficiency, July. 24, 2015, "In the Matter of the Notice of Proposed Rulemaking Regarding Interconnection of Distributed Generation Facilities," Docket Number RE-00000A-07-0609 (<http://images.edocket.azcc.gov/docketpdf/0000161793.pdf>).

³ Alliance for Industrial Efficiency, Feb. 6, 2018, "Alliance for Industrial Efficiency Comments Regarding the 2017 Integrated Resource Plans filed by APS and TEP," Docket No. E-00000V-15-0094 (<http://docket.images.azcc.gov/0000185766.pdf>).



with APS' November 30, 2018, notice of intent to discontinue the DSM Self Direction Program,⁴ which provide APS customers with more options to improve the energy efficiency of their facilities. We strongly support energy efficiency programs and policies that encourage and advance energy efficiency and believe that such programs and policies benefit all Arizona consumers and businesses.

Therefore, we recommend that APS and the Commission:

- 1. Sustain APS funding for energy efficiency programs at prior program year levels;**
- 2. Restore customer incentives, especially for custom measures for large facilities, to prior levels and to levels comparable to those offered in other western states; and**
- 3. Continue APS' DSM Self Direction Program.**

About CHP and WHP in Arizona

CHP is a sustainable and efficient energy solution that recycles waste heat from power generation and converts it into useful thermal energy. By generating both heat (thermal energy) and electricity from a single fuel source, CHP dramatically increases overall fuel efficiency—allowing utilities and host companies to effectively “get more with less.” CHP more than doubles the fuel efficiency of a conventional plant, using more than 70 percent of fuel inputs. WHP systems recover waste heat and use it to generate electricity with no additional fuel and no incremental emissions. As a consequence, CHP and WHP can produce electricity while lowering costs for both host companies and all Arizona ratepayers.

In Arizona, there is a substantial opportunity to implement CHP. Currently, the state has 12 CHP sites, generating nearly 83 megawatts (MW) of clean and efficient power.⁵ But the potential is far greater. The Department of Energy estimates the state has 2,422 MW of remaining CHP and WHP technical potential capacity (identified at 5,703 sites), with 638 MW of remaining onsite technical potential in the industrial sector alone.⁶ A 2016 report from the Alliance for Industrial Efficiency found that deploying an economically viable portion of the state's CHP and WHP potential,⁷ would save Arizona's industrial sector customers nearly \$524 million in cumulative electricity costs from 2016 to 2030.⁸ Cutting electricity costs in this way would help make the state's industrial customers more competitive.

⁴ Arizona Public Service Company, Nov. 30, 2018, “Notice of Intent to Discontinue DSM Self Direction” (<http://docket.images.azcc.gov/0000194006.pdf>)

⁵ U.S. DOE Combined Heat and Power Installation Database, (<https://doe.icfwebservices.com/chpdb/state/AZ>).

⁶ U.S. Department of Energy, Mar. 2016, “Combined Heat and Power (CHP) Technical Potential in the United States” (<https://www.energy.gov/sites/prod/files/2016/04/f30/CHP%20Technical%20Potential%20Study%203-31-2016%20Final.pdf>).

⁷ Percentage of Arizona's technical potential for CHP with less than 10-year payback period.

⁸ The Alliance for Industrial Efficiency, Sep. 2016, “State Ranking of Potential Carbon Dioxide Emission Reductions through Industrial Energy Efficiency” (http://alliance4industrialefficiency.org/wp-content/uploads/2016/09/FINAL-AIE-State-Industrial-Efficiency-Ranking-Report_9_15_16.pdf). Report considers potential for CHP alongside other modest



Arizona is well-positioned for CHP growth in the manufacturing sector. Manufacturing accounts for 8.6 percent (\$24 billion in 2013) of the total gross state product and employs nearly six percent of the workforce.⁹ Arizona's industrial sector consumed 16.3 percent of the total energy used statewide in 2013 (or 235.1 trillion British thermal units).¹⁰ This energy-intensive sector is well-suited for capitalizing on the significant remaining technical potential for CHP.

Currently, under Arizona's Electric Energy Efficiency Resource Standard (EERS), utilities may count the energy savings from CHP systems that do not qualify under the Renewable Energy Standard.¹¹ APS has also provided the option for incentives through the Solutions for Business program for qualifying custom CHP projects since 2006.¹² The proposed funding cuts could weaken the state's ability to meet the savings target laid out in Arizona's EERS that requires APS to achieve energy savings equivalent to 22 percent of retail sales by 2020. Further, reducing the custom incentive levels will hinder the potential for additional CHP development in the state as well as other energy efficiency investments in manufacturing and large industrial facilities.

Recommendation 1: Sustain APS funding for energy efficiency programs at prior program year levels, particularly for the Solutions for Business Program.

Energy efficiency is a least-cost system resource; fulfilling customer energy demands by increasing energy efficiency is cheaper than building new power plants or transmission and distribution infrastructure. Not only that, large C&I efficiency programs are among the *most* cost-effective of all efficiency programs, and can meet demand for as little as 3¢/kWh.¹³ Therefore, the large cuts to APS' C&I incentives, which impact technologies like CHP, is particularly concerning.

In its 2018 mid-year DSM progress report, APS indicated that it has budgeted \$15.2 million by the end of 2018 for its non-residential energy efficiency programs.¹⁴ This amount is substantially lower than its 2017 expenditures on non-residential energy efficiency programs (\$29.1 million), representing a 48-percent cut.¹⁵ Overall, APS has proposed to reduce its portfolio-wide demand

industrial efficiency improvements. Citation here refers to unpublished data reflecting CHP and WHP deployment alone.

⁹ National Association of Manufacturers, Feb. 2015, "Arizona Manufacturing Facts," (<http://www.nam.org/Data-and-Reports/State-Manufacturing-Data/2014-State-Manufacturing-Data/Manufacturing-Facts--Arizona>).

¹⁰ U.S. Energy Information Administration, "Arizona: State Profile and Energy Estimates," December 2015 (<https://www.eia.gov/state/?sid=AZ#tabs-2>).

¹¹ Arizona Corporation Commission, [Docket No. RE-00000C-09-0427](#), [Decision No. 71819](#), p. 104.

¹² Arizona Public Service Company, "In the Matter of the Application of Arizona Public Service Company for a Ruling relating to its 2016 Demand Side Management Implementation Plan," Docket No. E01345A-15-0182 Response to Commissioner Bob Burns' July 9, 2015 Letter, (<http://docket.images.azcc.gov/0000165621.pdf>).

¹³ ACEEE, Mar. 2014, "The Best Value for America's Energy Dollar: A National Review of the Cost of Utility Energy Efficiency Programs" (<http://aceee.org/research-report/u1402>).

¹⁴ Arizona Public Service Company, Aug. 31, 2018. "2018 Mid-Year Demand Side Management Status Report" (<http://docket.images.azcc.gov/0000191757.pdf>). This amount is for energy efficiency only and does not include monies budgeted for electric vehicle programs.

¹⁵ Arizona Public Service Company, Mar. 1, 2018, "2017 Demand Side Management Annual Progress Report" (<http://docket.images.azcc.gov/0000186159.pdf>).



side management expenditures from about \$61.0 million in 2017¹⁶ to about \$44.1 million budgeted in 2018,¹⁷ a 28-percent reduction.

Our members strongly support utility energy efficiency programs because these programs grow the Arizona economy, reduce grid demand, and support a diverse business sector. Utility efficiency programs help leverage greater market activity for businesses to improve their bottom lines. When our members reduce their energy use, they save money, increase profits, and create more jobs. According to data from the 2018 U.S. Energy and Employment Report, there are already more than 40,000 energy efficiency jobs in Arizona.¹⁸ Robust efficiency programs help keep these workers in business—and create additional opportunities. Having easy access to business, commercial, industrial energy efficiency programs and services provides our members and their Arizona clients with tools to manage high electricity costs through energy-efficient strategies from building retrofits to technological upgrades to manufacturing processes. For these reasons, we strongly recommend that APS funding for energy efficiency programs be sustained at prior program year levels.

Recommendation 2: Restore customer incentives—especially for custom measures for large facilities—to prior levels and to levels comparable to those offered in other western states.

APS' proposed DSM plan significantly reduces the utility's budget for existing large facilities. For instance, APS reduced its annual budget for its Solutions for Business Program/Large Existing Facilities Program by approximately 37 percent in 2018 from 2017 budget levels (from \$19,835,637 budgeted in 2017¹⁹ to \$12,488,018 budgeted in 2018²⁰). Figure 1 shows the changes in APS' annual budget for the Solutions for Business Program since 2012. The proposed program budget for 2018 is the lowest since the program's inception.

¹⁶ *Id.* This amount does not include APS' performance incentive in order to provide an apples-to-apples comparison with APS' 2018 budget.

¹⁷ Arizona Public Service Company *supra* note 14. This amount is for demand side management only and does not include monies budgeted for electric vehicle programs.

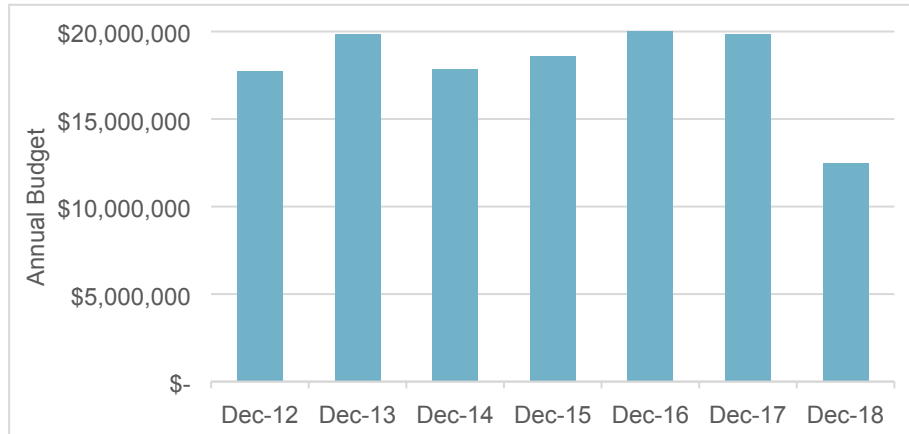
¹⁸ Environmental Entrepreneurs (E2) and E4TheFuture, Dec. 2016, "Energy Efficiency Jobs in America" (https://e4thefuture.org/wp-content/uploads/2016/12/EnergyEfficiencyJobsInAmerica_FINAL.pdf).

¹⁹ Arizona Public Service Company, Sep. 1, 2017, "2017 Mid-Year Demand Side Management Status Report" (<http://docket.images.azcc.gov/0000182475.pdf>).

²⁰ Arizona Public Service Company *supra* note 14.



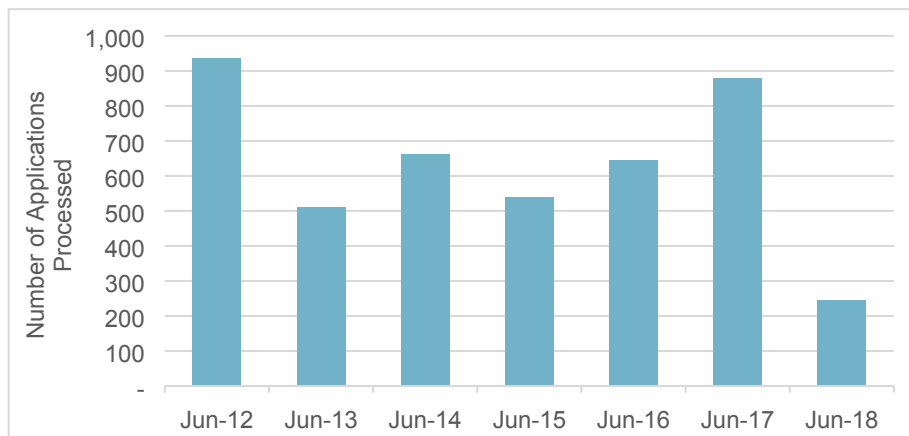
Figure 1. APS' Large Existing Facilities Program* Annual Budget (2012-2018)²¹



**Also called the Solutions for Business Program*

Further, this decrease in program commitments has resulted in a substantial decrease in program participation. As Figure 2 indicates, only 244 applications were processed for the program as of June 2018, whereas 879 applications were processed by the same time the previous year.

Figure 2. Applications Processed in the Large Existing Facilities Program* by Mid-Year (2012-2018)²²



**Also called the Solutions for Business Program*

These budget cuts translate to lower customer incentives (\$/kWh). Notably, APS now has one of the lowest effective C&I incentives in the western U.S. Table 1 summarizes custom incentive levels for select investor owned utilities in the region, including APS' effective incentive level.

²¹ Data comes from Arizona Public Service Company's Mid-Year Demand Side Management Status Reports for 2012-2018 filed with the Arizona Corporation Commission.

²² *Id.*



Table 1. Incentive Levels for Custom Energy Efficiency Measures by Utility

Utility	State	Incentive Level
Puget Sound Energy Inc.	WA	\$0.30/kWh
Portland General Electric	OR	\$0.22 - \$0.25/kWh
PacifiCorp	OR	\$0.22/kWh
Avista Corp	ID, WA	\$0.20/kWh
PacifiCorp	WY	\$0.15/kWh + \$50/kW average monthly demand reduction
PacifiCorp	UT	\$0.15/kWh
PacifiCorp	WA	\$0.15/kWh
UNS Electric	AZ	\$0.07/kWh
Pacific Gas & Electric Co.	CA	\$0.06/kWh, \$0.12 /kWh
Arizona Public Service	AZ	\$0.058/kWh²³

Strikingly, with an effective incentive level of \$0.058/kWh, APS now has the lowest incentives of the investor owned utilities listed in the above table, which span seven western U.S. states. Weakening the incentives for custom measures, such as CHP, discourages participation in APS’ efficiency programs.

Recommendation 3: Continue APS’ DSM Self Direction Program.

On November 30, 2018, APS filed a notice of intent to discontinue its DSM Self Direction Program.²⁴ This program gives APS customers more options to improve energy efficiency at their facilities, allowing non-residential customers who use more than 40 million kWh/year to “self-direct” their funds to support their own energy efficiency projects.

APS cites customer equity concerns as one reason why they are requesting to discontinue the program. Since the current Self Direction structure covers up to 100 percent of the incremental cost of a qualifying energy efficiency project, for some projects APS incentives may be required to cover the total cost of the project. APS is concerned that this is a higher incentive level that is available to non-eligible C&I customers. While we acknowledge APS’ concerns, we believe that discontinuing this program may cause other equity issues that will diminish the integrity of the APS efficiency programs. If customers do not have a self-direct option, they may seek eligibility to opt out completely of the efficiency programs. When some customers are allowed to opt out, all other customers have to pay more to achieve the same energy efficiency goals. Opt-out policies can cripple utility efficiency programs by prompting big energy users to leave and withdraw their fair share of investments in the program. In Indiana, for example, opt-out policies have resulted in about 70-80 percent of the industrial electricity market withdrawing from the

²³ APS’s custom incentive level is \$0.28/kWh saved between 3 and 8 p.m., weekdays, June through September, up to 75 percent of the cost, which equates to an effective incentive level of ~\$0.058/kWh.

²⁴ Arizona Public Service Company, Nov. 30, 2018, “2018 APS Demand Side Management Implementation Plan, Notice of Intent to Discontinue DSM Self Direction and Customer Financing programs,” Docket No. E-01345A-17-0134 (<http://docket.images.azcc.gov/0000194006.pdf>).



state's utility efficiency programs.²⁵ This means that the state has less money to meet its energy efficiency goals. Analyses have also shown that Indiana has lost jobs and seen higher costs as a result.²⁶

Self-direct programs, such as APS' program, allow large energy users to control how some or all of their energy efficiency fees are used, but do not allow them to opt out of fees and programs completely. Well-structured self-direct programs offer large energy users greater flexibility and control, while ensuring measurable, cost-effective energy savings are achieved for all customers in the utility system. Therefore, we strongly support the continuation of this program and strongly oppose APS' proposal.

Conclusion

For all of the reasons stated above, the Alliance urges APS and the Commission to:

- (1) Sustain APS funding for energy efficiency programs at prior program year levels;
- (2) Restore customer incentives, especially for custom measures for large facilities, to prior levels and to levels comparable to those offered in other western states; and
- (3) Continue APS' DSM Self Direction Program.

Doing so would encourage greater use of energy efficiency in the state, including CHP and WHP. This, in turn, would lower electricity costs and increase resiliency for not only APS' industrial customers, but all ratepayers by reducing the need for costly new power plants and transmission and distribution resources. Ultimately advancing CHP and WHP in Arizona will enhance the resiliency, competitiveness, availability and security of Arizona's energy infrastructure.

Thank you for your consideration.

Sincerely,

Jennifer Kefer
Executive Director
Alliance for Industrial Efficiency

²⁵ Over one year, based on customers with at least one electric meter with more than 1 MW electricity demand for any billing period.

²⁶ Energy News Network, Jul. 26, 2018, "Indiana cancellation of efficiency program took heavy toll, study says" (<https://energynews.us/2018/07/26/midwest/indiana-cancellation-of-efficiency-program-took-heavy-toll-study-says/>).