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BEFORE THE ARIZONA CORPORATION COMMISSION

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AZ CORP COMMISSION
DOCKET CONTROL

IN THE MATTER OF ENERGY EFFICIENCY
AND INTEGRATED RESOURCE PLANNING

DOCKET NO. E-00000XX-13-0214

ORIGINAL

**SWEEP'S SECOND SET OF
INITIAL COMMENTS ON THE
PROPOSED ELIMINATION OF
ARIZONA'S ENERGY
EFFICIENCY STANDARDS**

**SECOND SET OF INITIAL COMMENTS OF
THE SOUTHWEST ENERGY EFFICIENCY PROJECT**

The Southwest Energy Efficiency Project (SWEEP) appreciates the opportunity to submit this second set of initial comments in response to Staff's request for informal comments on the proposed draft rules filed on November 4, 2014, which would eliminate Arizona's Energy Efficiency Standards and make other changes to the Energy Efficiency Rules.

1. The Proposed Draft Rules are Not in the Public Interest

SWEEP continues to state its strong opposition to the proposed draft rules. The proposed draft rules are not in the public interest for the reasons described below. Therefore, the proposed draft rules should be withdrawn from further consideration or rejected in their entirety by the Commission.

Staff's filing presents no rationale for implementing radical changes to the current rules. In the event that the Commission decides to continue consideration of the proposed draft rules, rationale and analysis should be provided, with an opportunity for review and comment by parties and stakeholders, before the Commission acts or moves forward with any proposals in the draft rules.

A. Energy Efficiency is in the Public Interest

Electric energy efficiency is in the public interest

Arizona Corporation Commission

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Electric energy efficiency (EE) is in the public interest. Increasing EE provides significant and cost-effective benefits for all electric customers, the electric system, the economy, and the environment. Electric EE is a reliable energy resource that is less expensive than other available energy resources (see Section I.B below). Consequently, increasing EE saves consumers and businesses money through lower electric bills and the deferral of unnecessary infrastructure, resulting in lower total costs for customers. Increasing EE also reduces load growth; diversifies energy resources; enhances the reliability of the electricity grid; reduces the amount of water used for power generation; reduces air pollution; creates jobs that cannot be outsourced; and improves the economy. In addition, meeting a portion of load growth through increased EE can help to relieve system constraints in load pockets. By reducing electricity demand, EE mitigates electricity and fuel price increases and reduces customer vulnerability and exposure to price volatility. EE does not rely on any fuel and is not subject to shortages of supply or increased prices for natural gas or other fuels.

Natural gas energy efficiency is in the public interest

Natural gas EE is also in the public interest. Increasing natural gas EE provides significant and cost-effective benefits for natural gas customers, the natural gas and electric utility systems, the economy, the environment, and the service territory. Increasing natural gas EE saves consumers and businesses money through lower energy bills, resulting in lower total costs for customers. Natural gas EE programs help mitigate fuel price increases and reduce customer vulnerability and exposure to natural gas price volatility. Increasing natural gas EE also diversifies energy resources, reduces air pollution, and creates jobs that improve the local economy. Natural gas EE is a reliable energy resource that costs less than other resources for meeting the energy needs of customers in Arizona.

B. Energy Efficiency is Arizona's Least Expensive Energy Resource

Energy efficiency is the lowest-cost energy resource available to meet Arizona's needs

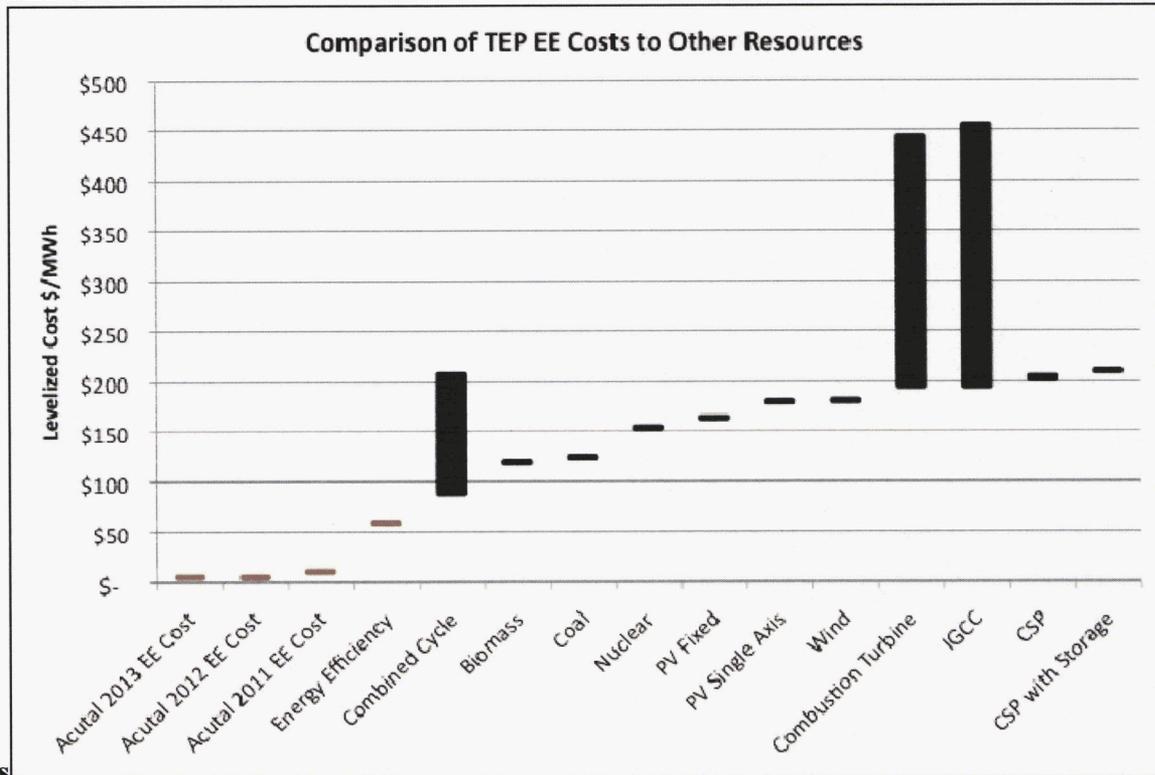
According to the 2014 Integrated Resource Plans (IRPs) of Arizona Public Service Company (APS) and Tucson Electric Power (TEP), EE is the lowest-cost energy resource available to meet current and future customer needs. Figure SWEEP-1 and SWEEP-2 compare TEP's and APS' energy resource costs as documented in each utility's respective IRP. For example, TEP estimates the next most affordable resource to be a combined cycle natural gas plant — a resource that is 1.5-to-2 times more expensive than EE. Notably, both APS and TEP estimate EE costs that are several times the actual cost of EE in recent years (see Figure SWEEP-1 and SWEEP-2, at the lower left which show APS' and TEP's actual cost of EE programs from 2011-2013). Even with EE cost assumptions that are far higher than actual experience-to-date, EE remains the lowest cost resource available.¹

¹ SWEEP does not agree with APS' and TEP's projected EE program costs. These costs are higher than necessary and higher than what we have observed in mature Demand Side Management portfolios in other states.

Arizona has one of the lowest costs of saved energy in the country

According to a recently-released Lawrence Berkeley National Laboratory analysis of annual EE program data in 34 states, which examined 5,900 program years worth of data from 2009-2013, Arizona has the third lowest total resource cost of saved energy in the country in terms of utility dollars spent per kWh saved. (Only North Carolina and Maine have lower costs.) Arizona’s cost is also significantly lower than the national average.¹

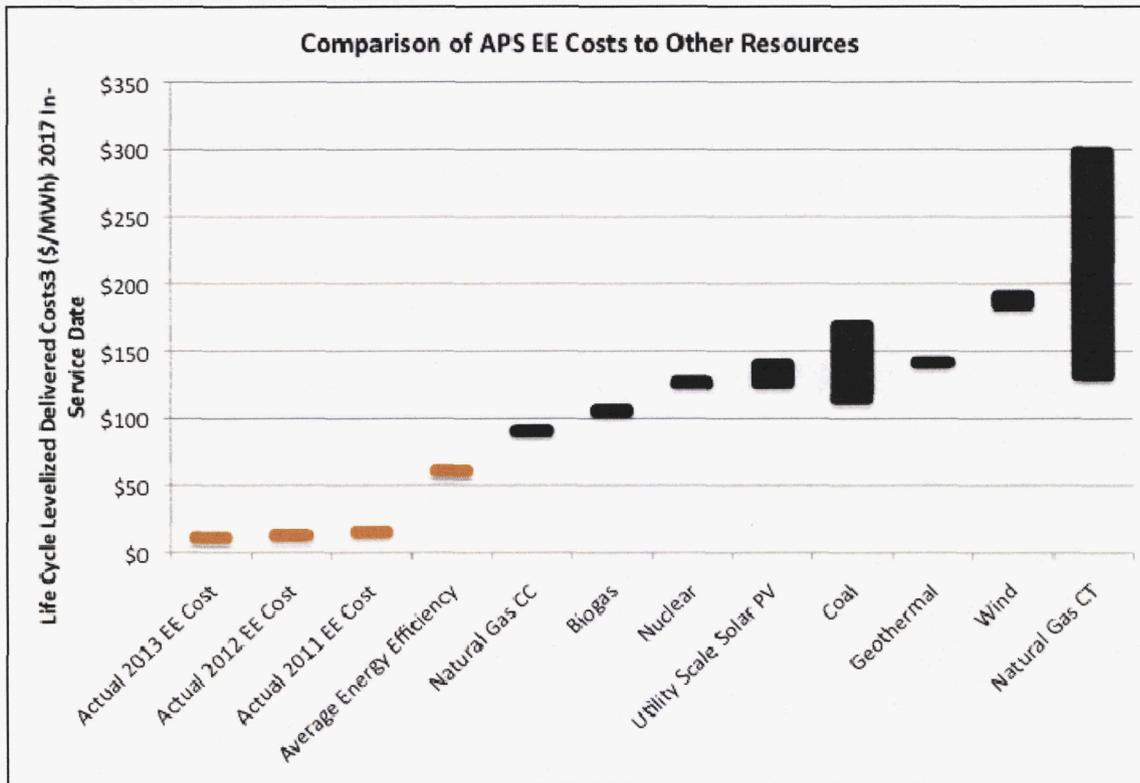
Figure SWEEP-1: Energy Efficiency is the Least Expensive Energy Resource Available to Meet TEP’s Customer



Needs

EE (shown in orange) is the least expensive energy resource available according to TEP’s 2014 IRP. TEP’s estimated cost of EE in its 2014 IRP is several times the actual cost of EE in recent years (2011-2013, see three leftmost orange bars). Even with EE cost assumptions that are far higher than actual experience-to-date, EE remains TEP’s lowest cost resource. Data Sources: TEP 2014 IRP, TEP 2011-2013 Demand Side Management Reports

Figure SWEEP-2: Energy Efficiency is the Least Expensive Energy Resource Available to Meet APS' Customer Needs



EE (shown in orange) is the least expensive energy resource available according to APS' 2014 IRP. APS' estimated cost of EE in its 2014 IRP is several times the actual cost of EE in recent years (2011-2013, see three leftmost orange bars). Even with EE cost assumptions that are far higher than actual experience-to-date, EE remains APS' lowest cost resource. Data Sources: APS 2014 IRP; APS 2011, 2012, and 2013 Annual Demand Side Management Reports

C. Energy Efficiency is Performing Well and Better Than Planned

Energy efficiency is costing less than anticipated

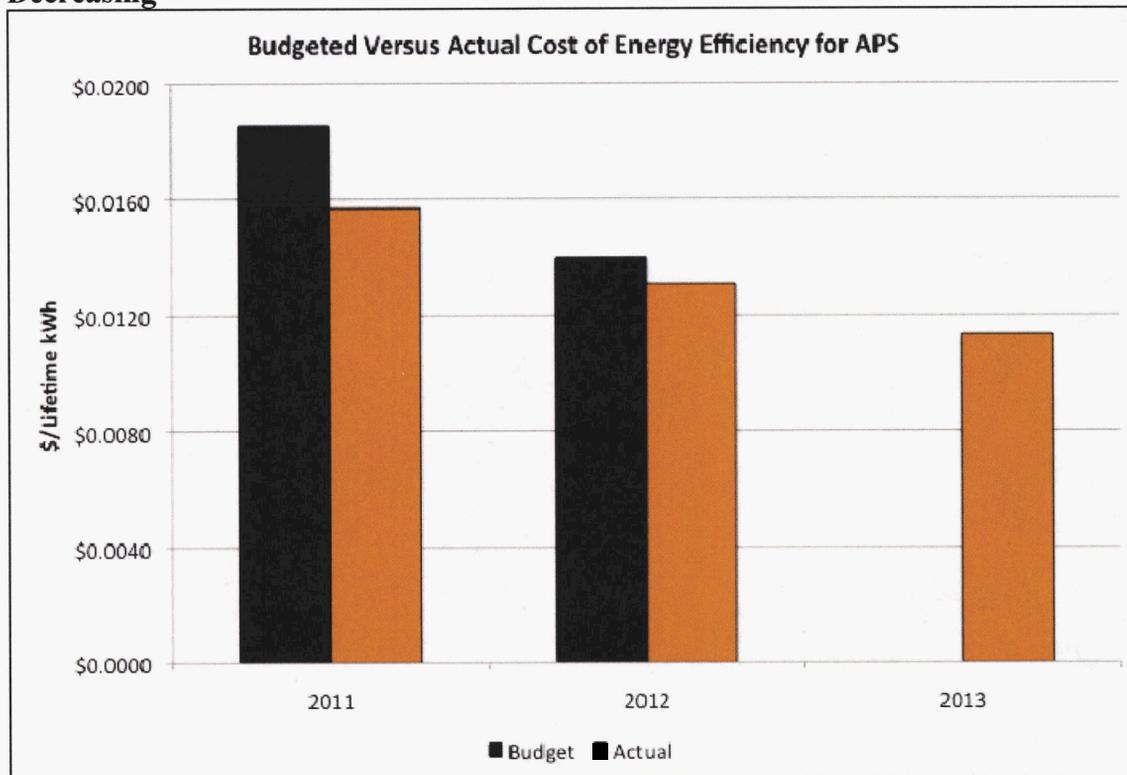
EE is costing Arizona less than anticipated. Indeed, over the last three years, the cost of EE has decreased for APS. The cost has also been less than budgeted. See Figure SWEEP-3.

In just 3-years, Arizona's EE Standards have delivered significant benefits

In the first three years since the EE Standards have been implemented:

- Arizona climbed from the 29th to the 15th most energy efficient state in the nation.ⁱⁱ
- APS and TEP customers saved enough electricity to power 133,000 homes for a year.ⁱⁱⁱ
- Businesses and residents benefitted from \$540 million in reduced energy, capacity, and water costs.^{iv} And,
- Energy-saving programs have served hundreds of thousands of Arizona residents and businesses.^v

Figure SWEEP-3: Energy Efficiency Costs Are Less than Budgeted and Have Been Decreasing



During each of the last three years, APS’ actual cost of saved energy (orange) has been less than budgeted (black). The cost of EE has also decreased over this time horizon. Actual EE costs include all costs of program delivery and implementation, e.g. rebates and incentives, training and technical assistance, consumer education, program implementation, program marketing, planning and administration, performance incentives, and measurement, evaluation, and research (MER) costs. A budget is not shown for 2013 because APS’ 2013 EE Implementation Plan was not approved until March 2014. Thus the budget for 2012 was technically the same as the budget for 2013. Data Sources: APS 2011, 2012, and 2013 Annual Demand Side Management Reports and Plans.

Arizona’s energy efficiency programs are nationally recognized

Many of Arizona’s EE programs have received national and regional recognition and have been upheld as models for other states and utilities to adopt. Examples of programs that have received national recognition include APS’ Multi-family Energy Efficiency program, APS’ Home Performance with ENERGY STAR[®] program, APS’ Solutions for Business program, and UniSource Energy’s Home Energy Assessment Program.^{vi}

Arizona Public Service has met Arizona’s targets every year. Salt River Project is also exceeding the Commission’s targets — ahead of schedule.

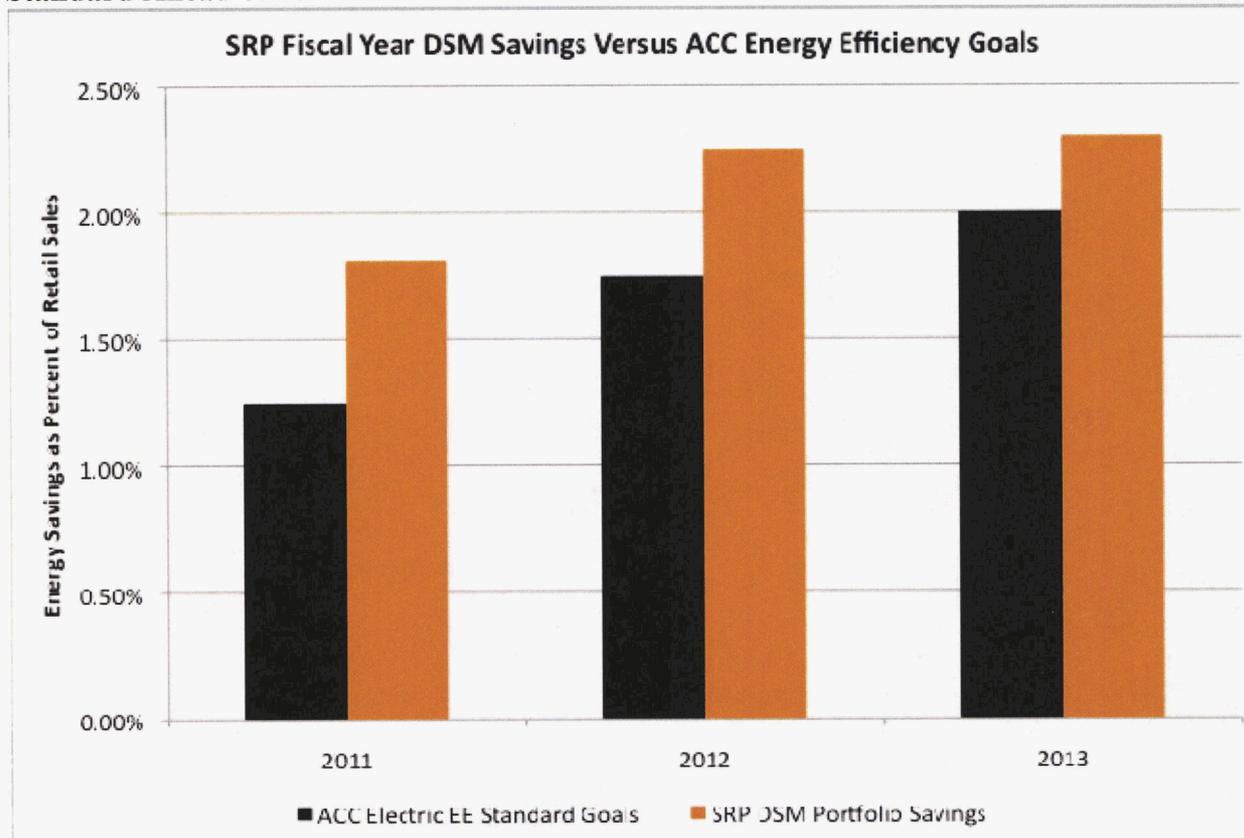
APS, Arizona’s largest electric utility, has met the EE Standards every single year at a cost that is less than budgeted (see Figure SWEEP-3).^{vii} APS has also exceeded previous savings requirements set by the Commission that pre-date the EE Standards. Indeed:

- In 2010 APS achieved 105% of its energy savings level.
- In 2011 APS achieved 115% of its energy savings level.
- In 2012 APS achieved 105% of its energy savings level.
- In 2013 APS achieved 101.6% of its energy savings level.^{viii}

APS also stated that it plans to meet its 2014 energy savings level.

Meanwhile, Salt River Project (SRP), which is not regulated by the Arizona Corporation Commission (ACC), has also exceeded the Commission's energy savings levels —ahead of schedule. SRP has done so in response to its own long-term EE Resource Standard (called its Sustainable Portfolio Principles or SPPs) that is similar to the Commission's EE Standards. See Figure SWEEP-4.

Figure SWEEP-4: SRP is Exceeding the Commission's Electric Energy Efficiency Standard Ahead of Schedule



SRP, which is not regulated by the Arizona Corporation Commission, is exceeding the Commission's energy saving targets ahead of schedule. SRP has its own Energy Efficiency Resource Standard that sets energy savings levels for the utility. Source: SRP Fiscal Year Demand Side Management Reports.

D. Elimination of the Energy Efficiency Standards Will Put Arizonans at Great Financial Risk

Elimination of the Energy Efficiency Standards will jeopardize billions of dollars in utility bill savings and thousands of in-state jobs

If fully implemented through 2020, the Standards are projected to save Arizonans billions of dollars on their utility bills^{ix} and create more than 10,000 jobs.^x Elimination of the EE Standards would jeopardize these significant economic benefits.

APS' and TEP's 2014 IRPs clearly demonstrate the need for energy efficiency investment above the level of the Electric Energy Efficiency Standard. Failure to invest in energy efficiency will result in significant investment in more expensive supply side options.

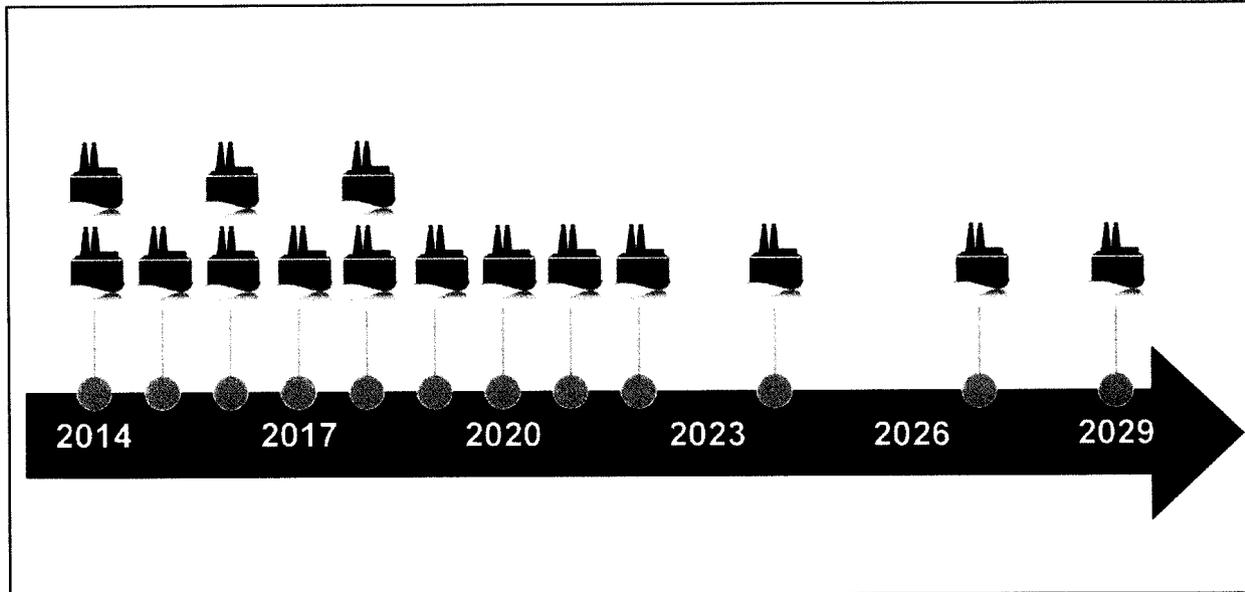
The 2014 Integrated Resource Plans (IRPs) of TEP and APS reveal that:

1. Both utilities need additional resources to meet load obligations over the next 15 years;
2. EE and demand response (DR) programs play a significant role in enabling APS and TEP to meet these obligations; and
3. EE is the least expensive energy resource available to meet customer needs (see Figure SWEEP-1 and Figure SWEEP-2; and SWEEP Appendix 1).

Total costs for customers will increase if TEP and APS under-invest in the EE resources documented in their IRPs, as TEP and APS will need to substitute for resources that are comparatively more expensive. If anything, APS and TEP should implement more EE than the EE Standard requires in order to meet customer needs and to keep total customer costs lower than they would be otherwise (see SWEEP Appendix-1).

For example, SWEEP examined a hypothetical scenario where APS' EE capacity is replaced with supply side resources. In this case we assumed the alternative supply side resource would be a 102MW combustion turbine (such as the one proposed by APS at Ocotillo). SWEEP-5 illustrates the build out of combustion turbine units necessary to provide capacity resources equivalent to the capacity provided by EE in APS' 2014 IRP. As shown in this figure, failure to invest in EE will result in significant investment in supply side resources that are comparatively more expensive (see Figure SWEEP-2). Indeed, APS would need to build 15 combustion turbines over the planning horizon and would need to commence construction immediately.

Figure SWEEP-5: Failure to Invest in Energy Efficiency will Result in Significant Investment in More Expensive Supply Side Resources on the Part of APS



If APS does not invest in EE it will need to invest in supply side resources that are comparatively more expensive (see Figure SWEEP-2). In this hypothetical scenario EE capacity would be replaced with 102MW combustion turbines. APS would need to construct 15 units over the next 15 years and construction would need to begin immediately. Data Source: APS 2014 IRP.

E. Significant Cost-Effective Opportunities to Reduce Total Customer Costs through Energy Efficiency Remain Untapped

Significant opportunities to reduce total customers costs through cost-effective EE remain untapped. Several of these opportunities were explored in depth during Commissioner Bob Burns' workshops on emerging technologies.^{xi} These presentations highlighted examples of cost-effective EE opportunities deployed in other states that are ripe for implementation in Arizona. For example:

- Ken Wilson with TransGrid Consulting described how Public Service of Colorado projects a system-wide rollout of conservation voltage reduction (or CVR) would deliver 2% energy savings for all customers.
- Mark Hamilton with Triple Point Energy explained how Strategic Energy Management (or SEM) programs are delivering 15% and 20% of the energy savings in the Demand Side Management portfolios of the Bonneville Power Administration and Energy Trust of Oregon respectively.
- Sam Krasnow with Firstfuel explained how advanced interval meter data can be leveraged to tap into business operational energy savings – doubling the EE potential in commercial buildings.
- Kevin Laukner with Honeywell explained how immediate and comprehensive adoption of existing Honeywell products (such as smart thermostats) could reduce energy

consumption by 20-25%.

- John Steinberg with EcoFactor described how its integrated EE and DR smart thermostat program has delivered air conditioning savings of 11% while also delivering significant DR capacity.

These examples represent *just a few* of the many existing cost-effective EE opportunities that Arizona could deploy to reduce customer utility bills and total customer costs immediately. In addition:

- SRP is implementing cost-effective EE opportunities in its service territory that Arizona's regulated utilities could easily replicate.
- Many new technologies and evolving customer service models exist to integrate EE and DR resources in order to enhance customer value, achieve program efficiencies, deliver greater utility bill savings and peak demand reductions, and provide a more comprehensive approach to customer energy management. Many of Arizona's existing EE programs offer a great platform to leverage these opportunities. For example, APS' pool pump program could easily be leveraged to deliver a pool pump demand response program.

F. Analyses Show that the Commission's Energy Efficiency Standard is Achievable and Can Be Exceeded

SWEEP's analyses show that through the implementation of existing best practice EE programs Arizona can meet *and exceed* the energy savings requirements in the EE Standard.^{xii}

II. The Existing Energy Efficiency Rules Themselves Do Not Need to be Opened Up or Revised. Arizona's Energy Efficiency Policy Framework Already Offers Significant and Adequate Flexibility.

A. The Implementation Plan Process Enables the Commission to Determine How Best to Implement Energy Efficiency

The existing EE Rules themselves do not need to be opened up or revised. Under the existing EE Rules, the Commission already has significant and adequate flexibility, including through the review and approval of the annual and biannual Demand Side Management Implementation Plans to determine how best to implement energy efficiency. The Commission has and continues to exercise this flexibility. For example:

- **The Commission can decrease or increase EE investment above or below the EE Rule requirements— without penalty.**

The Commission has done this in the past with utilities like TEP. For example, the Commission has slowed EE investment levels for TEP below the levels required by the EE Rules. Notably, SWEEP strongly disagreed with this decision because it has raised total costs for TEP customers.

- **The Commission can exempt utilities from the EE Rule requirements through partial or full waivers — without penalty.**

The Commission has done this in the past with smaller utilities, such as the Morenci Water and Electric Company.

- **The Commission can make adjustments to the types of investments that count as EE.**

The Commission has done this in the past with utilities like APS. For example, the Commission has allowed APS to include energy-savings from appliance standards toward achievement of the EE Rules. The Commission has also established a framework to allow APS to propose cost-effective supply-side investments toward EE Rule achievement.

B. Other Processes and Forums Exist to Help Inform the Commission's Energy Efficiency Decision-Making

In addition to the significant and adequate flexibility that the Commission has through the review and approval of the annual and biannual Demand Side Management Implementation Plans, the Commission has other existing forums and processes to help inform its EE decision-making. These opportunities are summarized in Table SWEEP-1.

C. A New Rulemaking Would be a Time-Consuming Process that Would Distract from the Key Priority of Reducing Customer Utility Bills

A new rulemaking would be a long, time-consuming process that would distract the Commission, the utilities, and stakeholders from the key priority of providing cost-effective energy savings and reducing utility bills for customers.

Table SWEEP-1: Current Forums and Processes Exist to Help Inform the Commission's EE Decision-Making

Existing Process or Forum	Opportunity	EE Results & Performance	Measurement, Evaluation, and Research (MER)	Cost and Cost Effectiveness of EE	Performance Incentives	Level of EE Investment	New EE Opportunities	Cost Recovery
Demand Side Management (DSM) Implementation Plan Review and Approval	Review past and future DSM programs; program and portfolio costs; level of EE investment; EE cost-effectiveness; EE performance incentives; and new EE investment opportunities	X	X	X	X	X	X	
Review Annual and Semi-annual DSM Reports, Including MER Reports	Review DSM program results; program and portfolio costs; EE cost-effectiveness; measurement, evaluation, and research (MER) results and processes including technical reference manuals; and effectiveness of performance incentives	X	X	X	X	X		
Review of Integrated Resource Plans	Review EE results and performance to date; current and future costs of EE; new EE investment opportunities; and level of EE investment	X		X		X	X	
Staff-led Cost-Effectiveness Workshops (See Appendix SWEEP-2)	Explore effective options for cost-effectiveness analysis models; and resolve and document differences in key analysis input values			X				
Utility Rate Cases	Explore options for EE cost recovery and design of EE performance incentives				X			X

III. The Integrated Resource Plan (IRP) Process is Broken and Ineffective. It Should be Improved by the Commission in a Separate Effort. Energy Efficiency Determinations or Goal Setting Should Not Be Moved Into the Current Ineffective IRP Process.

The Commission's current IRP process is broken and ineffective. The Commission should significantly improve the IRP process, including its independence and effectiveness, through a separate effort.^{xiii} Such an IRP effort does not necessarily require a revision of the IRP Rules. The Commission should not consider placing EE determinations or goal setting into the current broken IRP process. *Any such IRP process improvement efforts should be completed and should demonstrate effectiveness before any changes to EE are contemplated.*

A. Commission Staff Acknowledges that Arizona's Utilities are Making Investment Decisions Without Stakeholder Input or Economic Justification Within the Context of the IRPs

At the November 7, 2014, special open meeting on the most recent utility IRPs, Commission Staff acknowledged several key problems with the current IRP process. One key finding was that that utilities are making investment decisions without stakeholder input or economic justification within the context of the IRPs.^{xiv} (APS' Ocotillo Modernization project was specifically cited as an example of this issue.) Currently no active efforts are underway to strengthen the IRP process.

B. Diverse Stakeholders Agree that the Commission's Current IRP Process is Flawed

At the Commission's November 7, 2014, a diverse group of stakeholders expressed frustration with the inadequacies of the Commission's current IRP process.^{xv} Comments included the following:

- "It is critical to point out that while APS is a wonderful company and does a wonderful job keeping the lights on, their incentives do not automatically line up with the Commission and consumers... The Commission and the stakeholders need to have an opportunity to look to see if the decision that is clearly in the best interest for the company is also in the best interest for consumer and the state as a whole. I thought this [IRP] process was that. If this process is not going to be that then we probably need to come up with a process to determine what that process is." – **Greg Patterson, Arizona Competitive Power Alliance**

- “RUCO also believes that the [IRP] process has to be revised.” – **Lon Huber, Residential Utility Consumer Office (RUCO)**
- “To me if this [IRP] process was working the way that I see that it works in other states, [the Ocotillo Modernization Project] would have shown up two years ago [in APS’ 2012 IRP]. You would have been able to evaluate it in this process and get maybe an approval.” – **Amanda Ormond, Western Grid Group**
- “I think it is unclear for some stakeholders that are participating — non-utility stakeholders — how our input helps to drive the final decision on [the IRPs]. We submitted some extensive comments on the plans and from just a brief review of the Consultant report it doesn’t really look like those have been thoroughly considered or incorporated.” – **Edward Burgess, Solar Energy Industries Association**
- “It is somewhat of a concern that we went through the IRP process last time and as you say we have a major decision on the [Ocotillo] expansion that wasn’t discussed in that process and is now just kind of assumed in this process. And so we have spent a tremendous amount of time working in the process like this and if it is simply going to be an acknowledged scenario that is only a possible scenario and then the Company can do what they want and assume it in the next [IRP] then I do wonder why the Commission devotes this much resources to this process.” – **Greg Patterson, Arizona Competitive Power Alliance**

C. IRP Process Improvement Efforts Should Be Completed and Should Demonstrate Effectiveness Before Any Changes to Energy Efficiency are Contemplated.

Any IRP process improvement efforts should be completed and should demonstrate effectiveness before any changes to EE are contemplated.

D. National and Regional Studies Demonstrate that Even the Best IRP Processes Insufficiently and Inadequately Support Energy Efficiency Investment

The only states exceeding 1% savings as a percent of retail sales have energy saving requirements

National analyses reveal that the only states exceeding 1% savings as a percent of retail sales have energy saving requirements in place.^{xvi}

States with retail competition more readily adopt energy savings targets and adopt stronger energy savings targets than states without competition

A greater percent of states with retail competition have adopted energy savings requirements than states without competition. Additionally, states with retail competition are setting a higher bar for energy efficiency than those without competition.^{xvii}

National evidence reveals energy efficiency resource standards are more effective than IRPs in driving energy efficiency investment

According to a new national analysis conducted by the American Council for an Energy Efficient Economy, there is no statistically significant difference between states with or without utility resource planning requirements on either utility EE spending (program costs as a percent of total revenues) or energy savings (electricity savings as a percent of total sales). However, states with EE resource standards average nearly 4 times as much EE program savings as the states that do not have requirements.^{xviii}

Comparison of utility energy efficiency policies and achievements in Arizona and Utah demonstrate that energy efficiency resource standards are more effective than IRPs in driving savings for customers

Arizona has stimulated strong electric utility energy efficiency programs through the EE Standard adopted in 2010 for investor-owned utilities. In addition, utilities in Arizona can collect lost revenues due to the energy savings resulting from their EE programs as well as a performance-based shareholder incentive. In contrast, there is no EES in Utah. The one and only investor-owned electric utility in Utah, Rocky Mountain Power (RMP) which is a subsidiary of PacifiCorp, is allowed cost recovery for its EE programs, and nothing more. There is no lost revenue recovery mechanism or shareholder incentive. RMP's EE programs are motivated by integrated resource planning (IRP) which is required by the state. PacifiCorp prepares a new IRP every two years, which identifies cost-effective energy savings potential and establishes long-term energy savings goals for the utility in each state it operates in. The utility commission in Utah approves cost-effective EE programs that are consistent with the IRP. In short, electric utility EE programs in Utah are IRP driven while in Arizona they are EES driven.

The energy savings achievements of the utilities in each state are significantly different. In Arizona, APS and TEP together saved 645 GWh/yr or 1.7% of sales through EE programs implemented in 2013. In Utah, RMP saved 243 GWh/yr or 1.0% of sales through EE programs implemented in 2013. The same pattern was observed in previous years; the utilities in Arizona achieved much more energy savings for their customers than did RMP in Utah (as measured by savings as a percentage of electricity sales).

In addition to achieving a higher level of energy savings, the Arizona utilities also were able to achieve savings much more cost effectively than RMP. In 2013, TEP saved 13.8 GWh/yr per million dollars of program expenditures; APS saved 8.7 GWh/yr per million dollars of

program expenditures; and RMP saved 5.5 GWh/yr per million dollars of program expenditures. The higher air conditioning load explains some of this difference but certainly not all of it; economy of scale also plays a role.

In summary, EES-driven electric utility efficiency programs in Arizona have resulted in much greater energy savings for households and businesses than has IRP-driven electric utility efficiency programs in Utah. In addition, utilities in Arizona have been able to deliver a much higher “bang per buck” than has the utility in Utah, demonstrating that high levels of energy savings can be achieved very cost effectively.

Arizona has long recognized the need for requirements related to energy efficiency

Arizona regulators have long recognized that utilities will not invest in the least-cost resource on their own. As a result, Arizona has put in place requirements related to energy efficiency since 2005.

Arizona’s 2014 IRPs illustrate why we need energy efficiency requirements

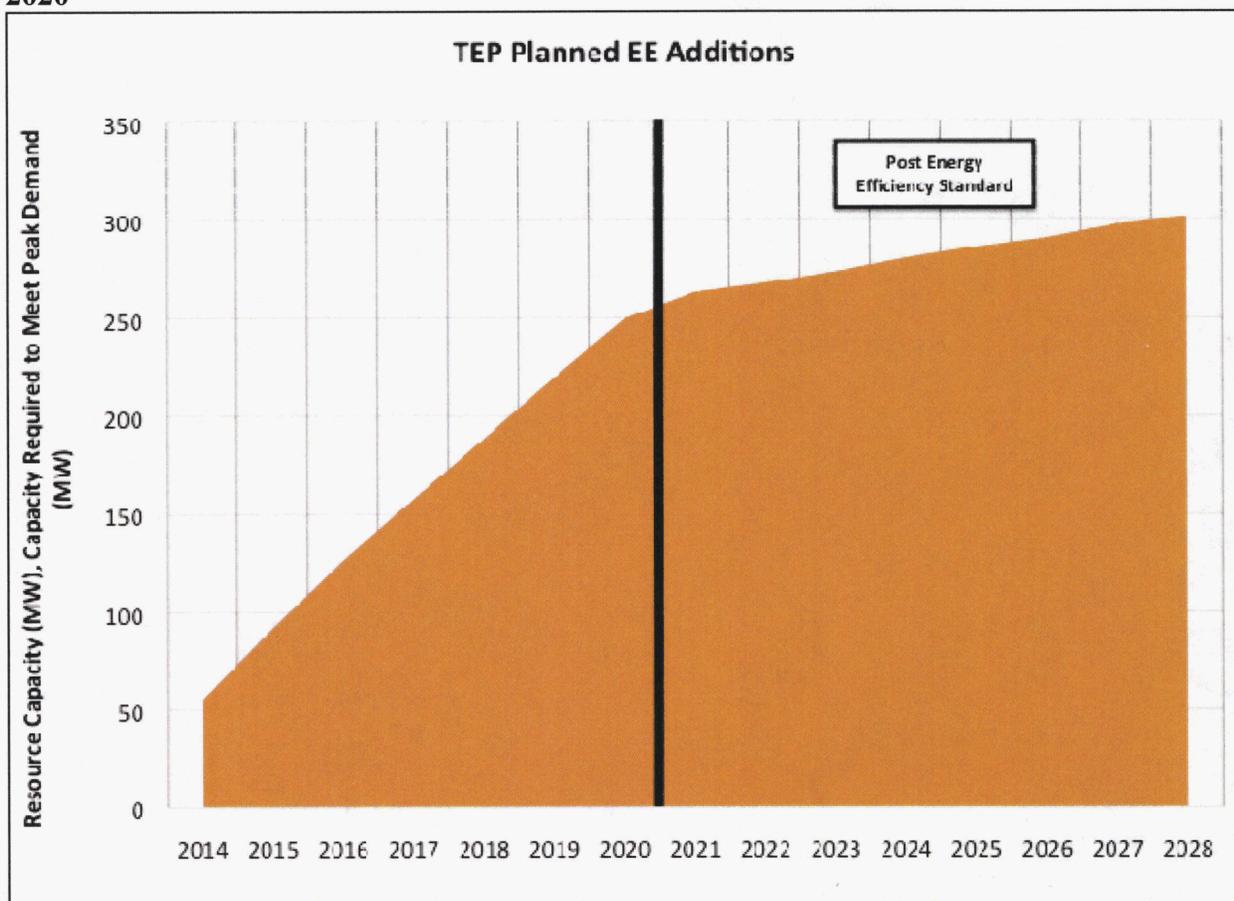
According to their 2014 IRPs, APS and TEP assume that EE resource contributions will level off and that less EE will be implemented after the EE Standard sunsets in 2020. See Figure SWEEP-6. Neither utility has provided any documentation for this assumption. Instead both utilities plan to rely increasingly and significantly on natural gas to meet customer needs. For example, in 2020 the APS-planned natural gas additions are 2-times the 2020 EE addition, and in 2025 the APS-planned natural gas additions are 3-times the 2025 EE addition. Apparently this is APS’ plan as represented in its IRP even though additional EE is available post-2020 and EE is much lower cost than the natural gas additions, as shown in Figure SWEEP-2.

Other states, including Massachusetts, also rely on long-term goals or statutes

Massachusetts, the state that ranks #1 in EE in the 2014 American Council for an Energy Efficient Economy State Scorecard, has been cited by some as a state that relies on goals set on a periodic basis, rather than through an EE Resource Standard. While Massachusetts does use a three-year EE plan process, these three-year plans are more like Arizona’s EE Implementation Plans, with specific budgets, program designs, and details set forth in the three-year plans. The three-year plans in Massachusetts are based foundationally on two state statutes. First, the Green Communities Act requires the achievement of all cost-effective EE, and therefore requires the achievement of high energy savings, which the three-year plans are developed to pursue and capture. Second, the Global Warming Solutions Act required the development of the Clean Energy and Climate Plan (CECP) – and in the CECP very high EE savings are set forth (electric savings of approximately 2.5-2.9% of retail energy sales in 2013-2012).

The requirement to achieve all cost-effective EE, set forth in the Green Communities Act statute, combined with the high energy savings levels in the Clean Energy and Climate Plan, drive the high levels of energy savings being achieved in Massachusetts. The three-year plans are the plans for how to *implement* the programs and the details to achieve the high savings levels.

Figure SWEEP-6: TEP Slows its Investment in EE After the EE Standard Sunsets in 2020



After the EE Standard sunsets in 2020, TEP slows investment in EE, despite the fact that EE is the least-cost resource available (see Figure SWEEP-1) and TEP is proposing additions of supply side resources that are comparatively more expensive. Data Source: TEP 2014 IRP.

IV. There are Other Ideas in the Proposed Draft Rules that Are Not in the Public Interest, and Therefore Should be Withdrawn or Rejected

There are several other concerning elements of the proposed draft rules that would undercut consumer savings. Some of these elements are described below.

A. Providing No Rationale, the Draft Rules Would Depart From the Commission's Long-Standing Use of the Societal Cost Test to Evaluate Energy Efficiency

Without providing any rationale, the draft rules propose to depart from the use of the societal cost test to evaluate EE opportunities. The Arizona Commission has used the societal cost test to evaluate EE opportunities since its 1991 Resource Planning Decision. As discussed in the March 18, 2014, EE Workshop, the use of the societal cost test as a primary screening methodology is standard practice nationally.^{xix}

Arizona's implementation of the societal cost test is also extremely conservative because certain measurable benefits are excluded from consideration in the calculation (e.g. reduced water use from power plants).^{xx} As such the test strictly compares EE investments with the next best supply side option (e.g. a natural gas investment). Thus any EE opportunity found to have a cost-benefit ratio greater than or equal to 1 is by definition better or equal to a natural gas investment (even without considering all of EE's benefits).^{xxi}

Instead, the draft rules propose to use the Ratepayer Impact Measure (RIM) cost-effectiveness test, which would eliminate the vast majority of EE programs and measures that have been proven to deliver cost-effective savings to customers in Arizona.

The RIM test is rarely used

The RIM test is rarely used because it is not an accurate way to determine EE cost-effectiveness. Only one state – Florida – uses the RIM test as a primary screening methodology to evaluate EE. The only other state that used the RIM test as its primary test (Virginia) has since clarified that EE opportunities cannot be disproved on the basis of one test.^{xxii}

Though the RIM test treats lost fixed costs as a cost, lost fixed costs are not a cost of energy efficiency. Commission Staff agrees.

The RIM test treats lost fixed costs as a cost of energy efficiency. However these are not EE costs. As Commission Utility Division Director Steve Olea testified during the Commission's hearing of APS' 2012 EE Implementation Plan:

“The fixed costs the company has are there whether you do EE or not. They're there. And the lost fixed costs, it's just part of the fixed costs that are already there. They're not created by performance incentive. They're not created by MER [Measurement, Evaluation, and Research]. They're not created by a surcharge you imposed. Those fixed costs are there on day one that they put a piece of plant in. They're not created by the EE program.” – Steve Olea, Director, Arizona Corporation Commission Utility Division^{xxiii}

The RIM test fails to consider bill impacts and bill savings for customers

The main question asked by the RIM test is, "Will rates increase?" As a policy matter, SWEEP believes that asking this question is useful in some instances, but not as a primary methodology for determining whether EE is cost-effective for customers. To make this determination, one critical question should be asked: Will bills or total costs for customers increase?

Crucially, the RIM test does not address this question. In fact, under some circumstances, EE will actually cause customers bills to decrease (even as rates increase). Thus, even under the RIM framework, foregoing EE would be a less cost effective option for all ratepayers than pursuing EE. Notably, the RIM test is never applied to supply-side investments - the bill impacts of which significantly dwarf the impacts of EE programs.

Finally, most customers are concerned about their BILLS increasing (not their rates) because the bill represents the total dollar amount they pay. Having a higher rate does not necessarily result in the highest electricity bills. In fact the states in 2011 with the highest electricity bills, were the states with the highest household electricity consumption not the highest utility rates.

The RIM test is deficient for other reasons

Additional deficiencies of the RIM test include the following:

- It does not consider the long-term costs of not making an EE investment. These costs can be significant. After all, it cost hundreds of millions to billions of dollars to build a power plant.
- The RIM test does not consider important benefits that EE delivers - reduced use of water for power plants, the value of reduced air emissions, etc.
- The RIM test is concerned with non-participants. The great news about energy efficiency programs, especially behavior programs and conservation voltage reduction (CVR) is that we have virtually no non-participants.

B. The Proposal Would Eliminate Natural Gas Energy Efficiency

As SWEEP explained above, EE determinations or goal setting should not be moved into the current ineffective IRP process. Moreover, natural gas companies like Southwest Gas are not required to submit an IRP plans. As a result, the draft proposal would eliminate natural gas EE.

C. The Proposal Could Completely Eliminate Funding for Low Income Bill Assistance

According to the comments of the Arizona Community Action Association, the language in the draft rules may preclude low income bill assistance funding. As such, Southwest Gas and APS may no longer be able to fund their bill assistance programs, which help vulnerable customers retain electricity and/or gas service during times of need.^{xxiv}

D. The Commission Should Consider Carefully a Requirement to Capitalize Energy Efficiency

The Commission should carefully consider any requirement to capitalize EE, as it would increase the overall costs of the EE programs over time. In addition, long amortization periods would produce large regulatory assets that persist for longer periods of time. Consequently, these regulatory assets would be inherited by future Commissions, potentially restricting the ability of future Commissions to change course as new needs arise. This may put future Commissions in a challenging position, especially if the costs of prior investments remain to be recovered, but the immediate energy savings benefits are not available to all current customers (e.g. if the Commission reduces or eliminates programs). For these reasons, this approach to EE program cost recovery is extremely uncommon.

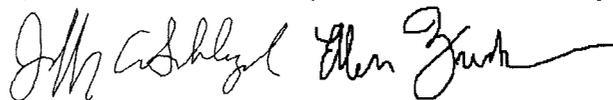
Instead SWEEP urges the Commission to reject the draft proposal and continue to retain its ability to consider capitalization of EE in individual utility rate cases as it has done in the past, for example with TEP.

V. The Commission Should Withdraw or Reject this Proposal.

There are so many proposed revisions in the proposed draft rules that are not in the public interest – from the elimination of the EE Standards, to the setting of goals through the currently weak and flawed IRP process, to the use of the RIM test, to the complete elimination of gas energy efficiency, to possible complete elimination of low income bill assistance – that SWEEP respectfully recommends that the Commission withdraw or reject this proposal.

Thank you for the opportunity to submit this second set of initial comments.

Respectfully submitted this 2nd day of December 2014 by:



Jeff Schlegel & Ellen Zuckerman
Southwest Energy Efficiency Project

ORIGINAL and thirteen (13) copies filed this 2nd day of December 2014 with:

Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, Arizona 85007

**Appendix SWEEP-1: SWEEP Comments on the 2014 Integrated
Resource Plans**

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

BOB STUMP, Chairman

GARY PIERCE

BRENDA BURNS

BOB BURNS

SUSAN BITTER SMITH

IN THE MATTER OF RESOURCE
PLANNING AND PROCUREMENT IN
2013 AND 2014.

DOCKET NO. E-00000V-13-0070

**SWEEP COMMENTS ON THE
2014 RESOURCE PLANS:
SWEEP ANALYSIS OF IRPS**

**COMMENTS OF THE SOUTHWEST ENERGY EFFICIENCY PROJECT (SWEEP):
SWEEP ANALYSIS OF THE ROLE OF ENERGY EFFICIENCY
IN MEETING FUTURE RESOURCE NEEDS**

The Southwest Energy Efficiency Project (SWEEP) appreciates the opportunity to submit comments on the 2014 Integrated Resource Plans (IRP or IRPs).

SWEEP examined the IRPs of the Arizona Public Service Company (APS) and the Tucson Electric Power Company (TEP) to explore the role energy efficiency and demand response programs play in meeting the future electric needs of the customers of both utilities. SWEEP's examinations and analyses are based entirely on the data and documentation the utilities provided in their IRPs and in their annual demand side management reports. SWEEP's analysis and findings are intended to provide additional information for the Commission's consideration of the APS and TEP 2014 IRPs.

SWEEP provides and summarizes its findings in three sections below:

1. The role of energy efficiency and demand response programs in the APS IRP.
2. The role of energy efficiency and demand response programs in the TEP IRP.
3. How energy efficiency programs meet capacity needs by building up the energy efficiency resource over time, and why this is appropriate and important.

Our key findings include the following:

- 1. APS and TEP need additional resources to meet load obligations over the next 15 years.*

2. *Energy efficiency and demand response programs play a significant role in enabling APS and TEP to meet these obligations.*
3. *APS and TEP both identify energy efficiency as the least expensive energy resource available to meet customer needs.*
4. *Total costs for customers will increase if TEP and APS under-invest in the EE resources documented in their IRPs, as they will need to substitute for resources that are comparatively more expensive. If anything, APS and TEP should implement more EE than the EE Standard requires in order to meet customer needs and to keep total customer costs lower than they would otherwise be.*
5. *EE programs meet capacity needs by building up the EE resource over time.*
6. *EE resources should be built up over time in order to lower program and ratepayer costs.*
7. *Cost-effective EE built up over time provides benefits today and tomorrow and helps to support and provide flexibility for new innovations and opportunities*

II. The Role of Energy Efficiency and Demand Response Programs in Arizona Public Service Company's 2014 Integrated Resource Plan

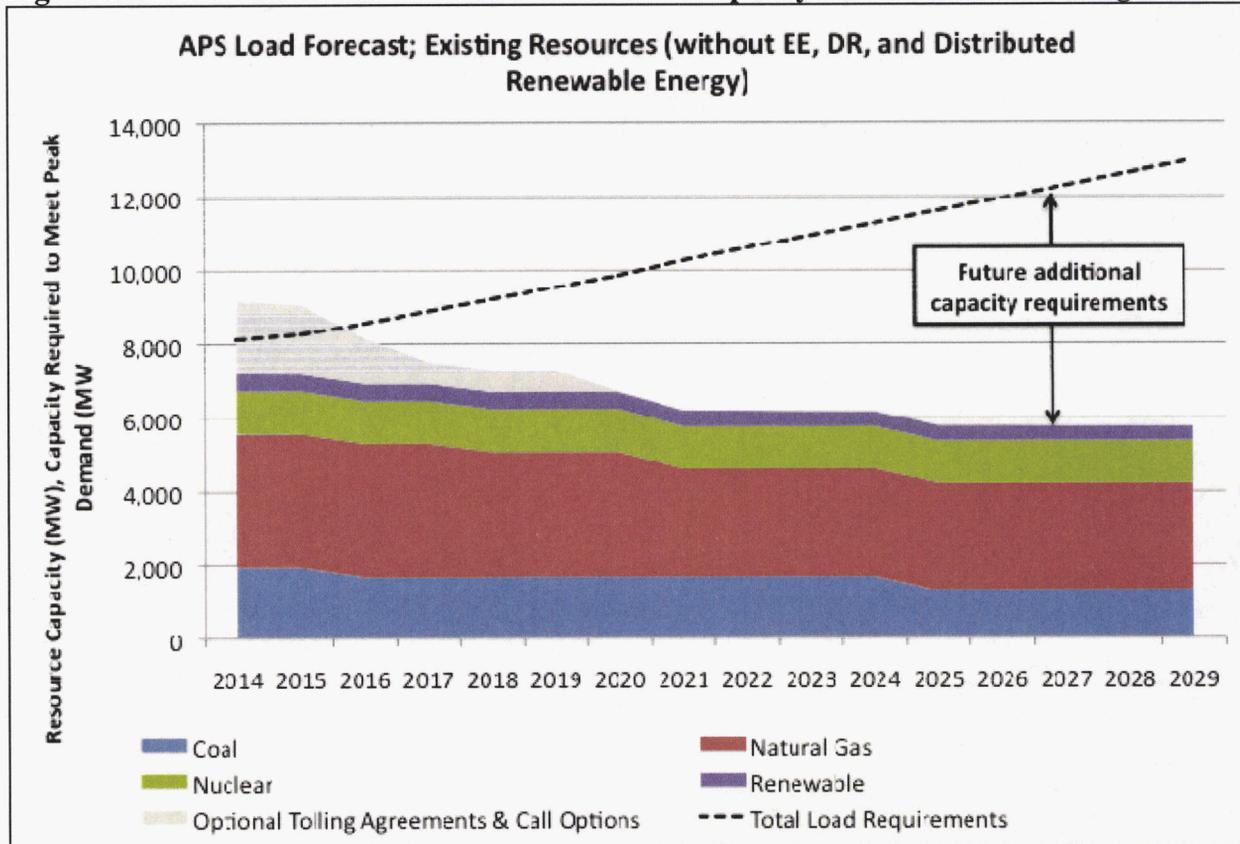
SWEEP reviewed the Arizona Public Service Company's (APS) 2014 Integrated Resource Plan (IRP) to examine the role energy efficiency (EE) and demand response (DR) programs play in meeting the future electric needs of APS customers. Below we provide a summary of our major findings for APS.

Finding #1: APS Needs Additional Energy Resources to Meet its Load Obligations

According to APS' 2014 IRP, APS will need additional capacity and energy resources to meet its load obligations over the fifteen-year planning horizon. Figure SWEEP-1 shows the capacity shortfall in more detail. The black dotted line represents APS' total capacity requirement (its firm load obligations plus a 15% planning reserve margin), based on the load forecast in APS' 2014 IRP. The colored regions below the black dotted line show the capacity contributions of APS' existing generation resources. The gray-shaded region shows the contributions of Market/Call Options and Tolling Agreements – resources that APS can *optionally* call upon to meet load when necessary. The gap between the black dotted line and the capacity contributions of APS' existing generation resources and optional Market/Call Options and Tolling Agreements represents the additional capacity that APS will need in order to fulfill its load obligations and

meet customer needs.

Figure SWEEP-1: APS' 2014 IRP Demonstrates a Capacity Need Over the Coming Years



Data Source: APS 2014 IRP

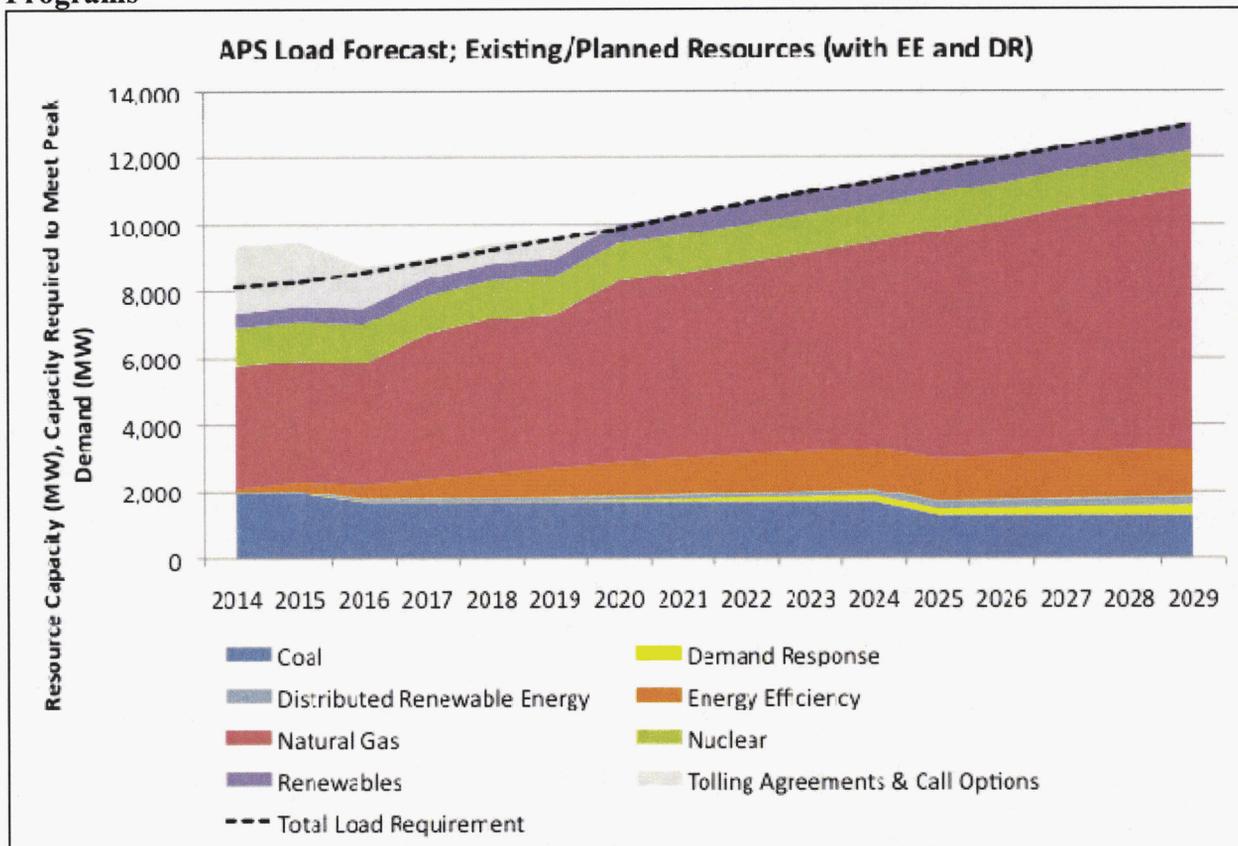
Finding #2: APS Plans to Meet Its Capacity Shortfall Through a Mixed Portfolio of Resources that Include Demand-Side EE and DR Resources

APS intends to invest in additional capacity and energy resources in order to fulfill its load obligations and meet customer needs. See Figure SWEEP-2. According to its 2014 IRP, APS plans to meet this capacity shortfall through a mixed portfolio of resource additions that include:

- 1) New natural gas resources (e.g. combined cycle resources and combustion/steam turbines)
- 2) New renewable energy resources (e.g. utility scale wind, geothermal, and solar resources)
- 3) New distributed renewable energy resources; and
- 4) Demand-side EE resources and DR, collectively called "Demand Side Management" or "DSM".

Figure SWEEP-2: APS Plans to Meet the Capacity Need Through a Mixed Portfolio of Resources, Including through EE and DR

Programs



Data Source: APS 2014 IRP

APS also has the option to call upon its Market/Call Options and Tolling Agreements to meet load when necessary. Note that in 2014-2016 it is the Market/Call Options in particular that may cause some reviewers of the APS IRP to perceive that APS has excess capacity. However, Market/Call Options, as a “resource,” are fundamentally different than a natural gas plant, EE programs, or other physical resources – based on their nature and intended purpose. Market/Call Options are intended to meet demand for electricity and to provide additional capacity to meet the demand, but usually for very short periods (hours) and often at fairly high costs per MWh, and only when APS exercises the option.

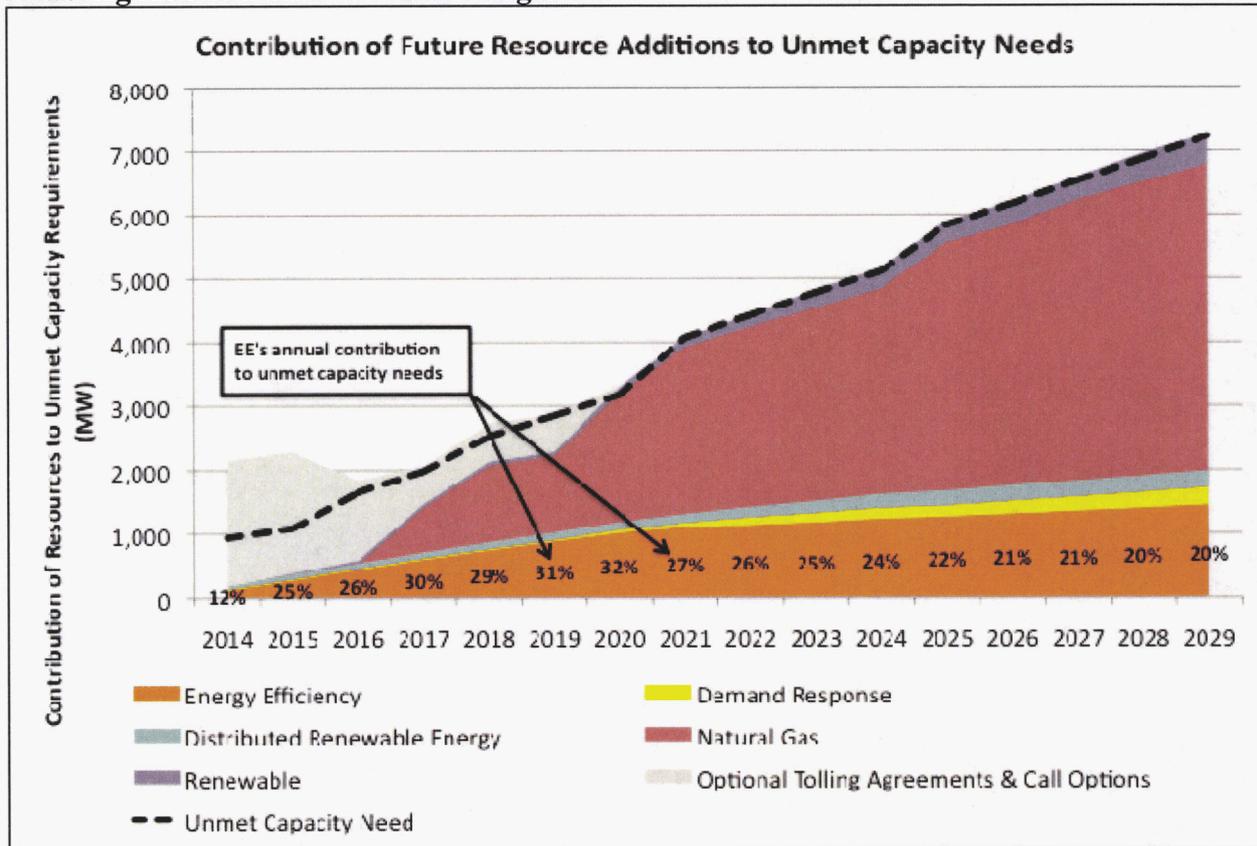
In SWEEP’s view it is useful for APS to have the Market/Call Options as a tool in the toolbox, because if, for example, the peak demand in the summer exceeds the forecast demand, then APS could exercise the Market/Call Options to meet the higher-than-expected peak demand for short periods of time. But Market/Call Options should not be perceived to be the same as physical capacity resources such as generating plants or EE programs.

Finding #3: Energy Efficiency Programs Make Significant Contributions Toward Enabling APS to Fulfill its Load Obligations

EE programs make significant contributions toward APS being able to fulfill its load obligations. As shown in Figure SWEEP-3, EE programs contribute a major share of APS’ future resource additions to meet capacity needs. Figure SWEEP-3 illustrates the fraction EE contributes each

year. In some years, such as 2019, EE’s contribution is as high as 31%. This analysis treats Market/Call Options and Tolling Agreements as optional resources that APS can call upon to meet load when necessary — which is how APS treats these resources as well.

Figure SWEEP-3: Energy Efficiency Programs Make Significant Contributions Toward Enabling APS to Fulfill its Load Obligations



Data Source: APS 2014 IRP

Note that APS assumes in its resource plan that EE resource contributions will tail off after 2020, the final year of the EE Standard, and that less EE will be implemented post-2020. APS has not provided any documentation for this assumption. SWEEP recommends that all cost-effective EE should continue to be pursued and implemented, including after the last year of the current EE Standard.

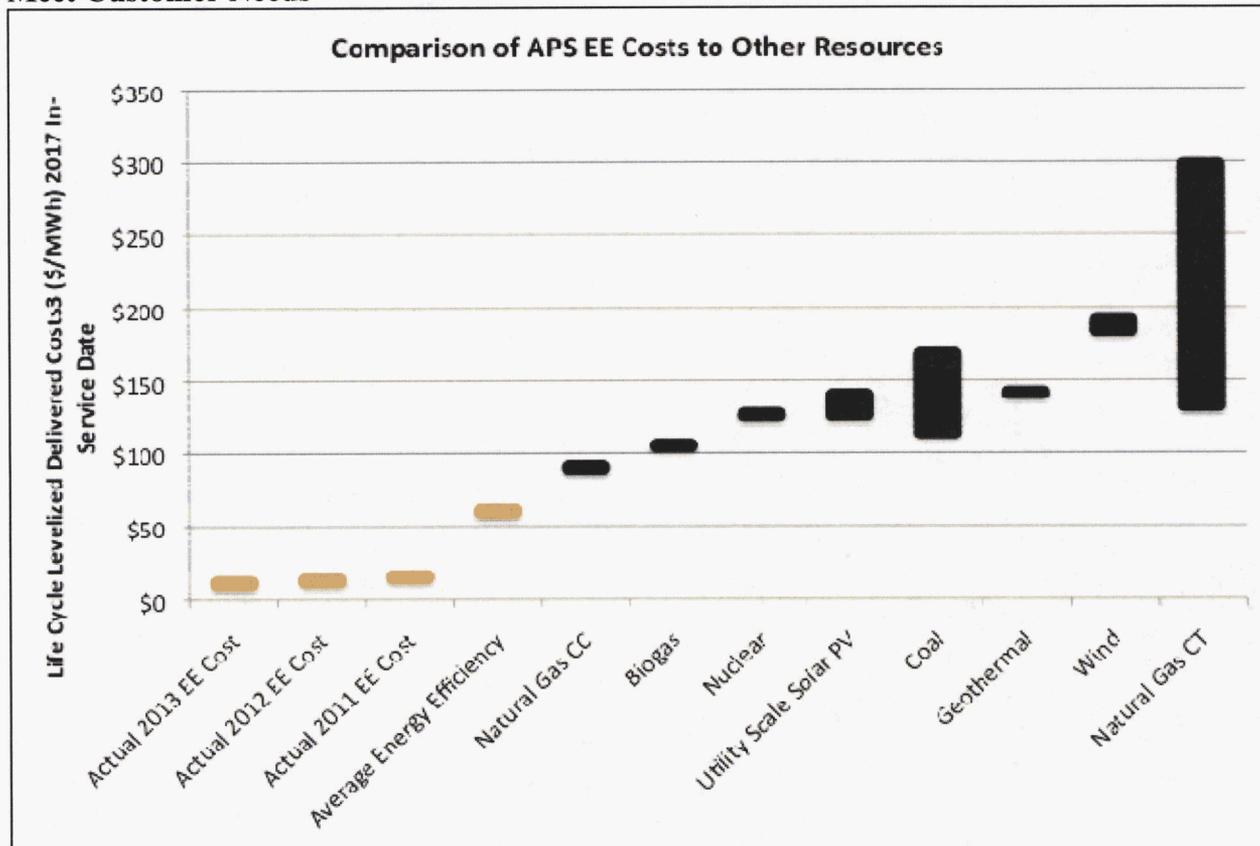
Finding #4: From a Ratepayer Perspective, Energy Efficiency is the Best and Lowest-cost Energy Resource APS Can Use to Meet the Needs of its Customers

From a ratepayer perspective, EE is the best and lowest-cost energy resource APS can use to meet the current and future needs of its customers. As shown in Figure SWEEP-4, investing in other resources would be more costly for ratepayers. For example, the cost of a natural gas combustion turbine is 2-to-4.5-times the cost of EE in APS’ 2014 IRP¹. Also, in its IRP 2014 APS is estimating EE costs that are several times the actual cost of EE in recent years (see Figure

¹ SWEEP does not agree with APS’ projected EE program costs. These costs are higher than necessary and higher than what we have observed in mature DSM portfolios in other states.

SWEEP-4, at the lower left which shows APS' actual cost of EE programs from 2011-2013). EE is still the lowest cost resource even when APS estimates costs that are far higher than actual experience-to-date.

Figure SWEEP-4: Energy Efficiency is the Least Expensive Energy Resource Available to Meet Customer Needs



Data Sources: APS 2014 IRP; APS 2011, 2012, and 2013 Annual Demand Side Management Reports

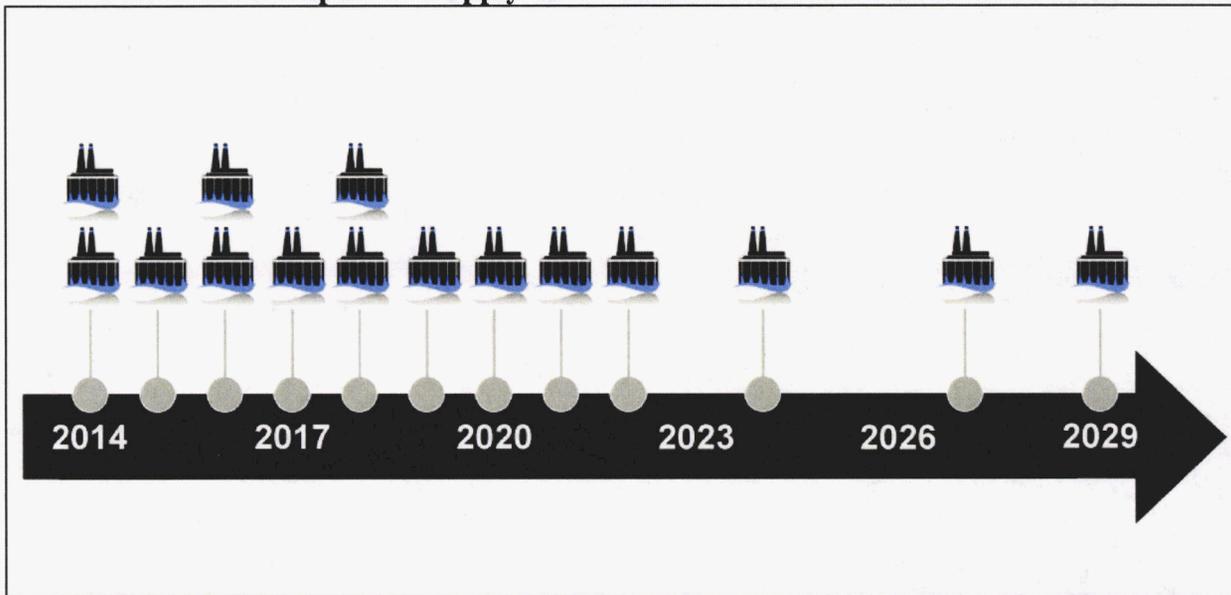
As shown in Figure SWEEP-9, APS plans to rely increasingly and significantly on natural gas to meet customer needs. For example, in 2020 the APS-planned natural gas additions are 2-times the 2020 energy efficiency addition, and in 2025 the APS-planned natural gas additions are 3-times the 2025 energy efficiency addition. Apparently this is APS' plan as represented in its IRP even though additional EE is available post-2020 and EE is much lower cost than the natural gas additions, as shown in Figure SWEEP-4.

Finding #5: APS' IRP Clearly Demonstrates the Need for Energy Efficiency Investment. Failure to Invest in Energy Efficiency will Result in Significant Investment in More Expensive Supply Side Resources.

The APS 2014 IRP clearly demonstrates the need to invest in EE programs based on APS' actual customer needs established in the utility's 2014 IRP. If APS under-invests in the EE documented in the 2014 IRP, and then has to add other resources to substitute for the EE resources identified in the IRP, the total costs for APS customers will be significantly higher (see SWEEP-4).

For example, we examined a hypothetical scenario where EE capacity is replaced with supply-side resources. In this case we assumed the alternative supply side resource would be a 102MW combustion turbine (such as the one proposed by APS at Ocotillo). SWEEP-5 illustrates the build out of combustion turbine units necessary to provide capacity resources equivalent to the capacity provided by EE in APS' 2014 IRP. As shown in this figure, failure to invest in EE will result in significant investment in supply side resources that are comparatively more expensive. Indeed, APS would need to build 15 combustion turbines over the planning horizon and would need to commence construction immediately.

Figure SWEEP-5: Failure to Invest in Energy Efficiency will Result in Significant Investment in More Expensive Supply Side Resources.



Data Source: APS 2014 IRP. Each unit above represents one 102MW combustion turbine that APS would need to build.

III. The Role of Energy Efficiency and Demand Response Programs in Tucson Electric Power Company's 2014 Integrated Resource Plan

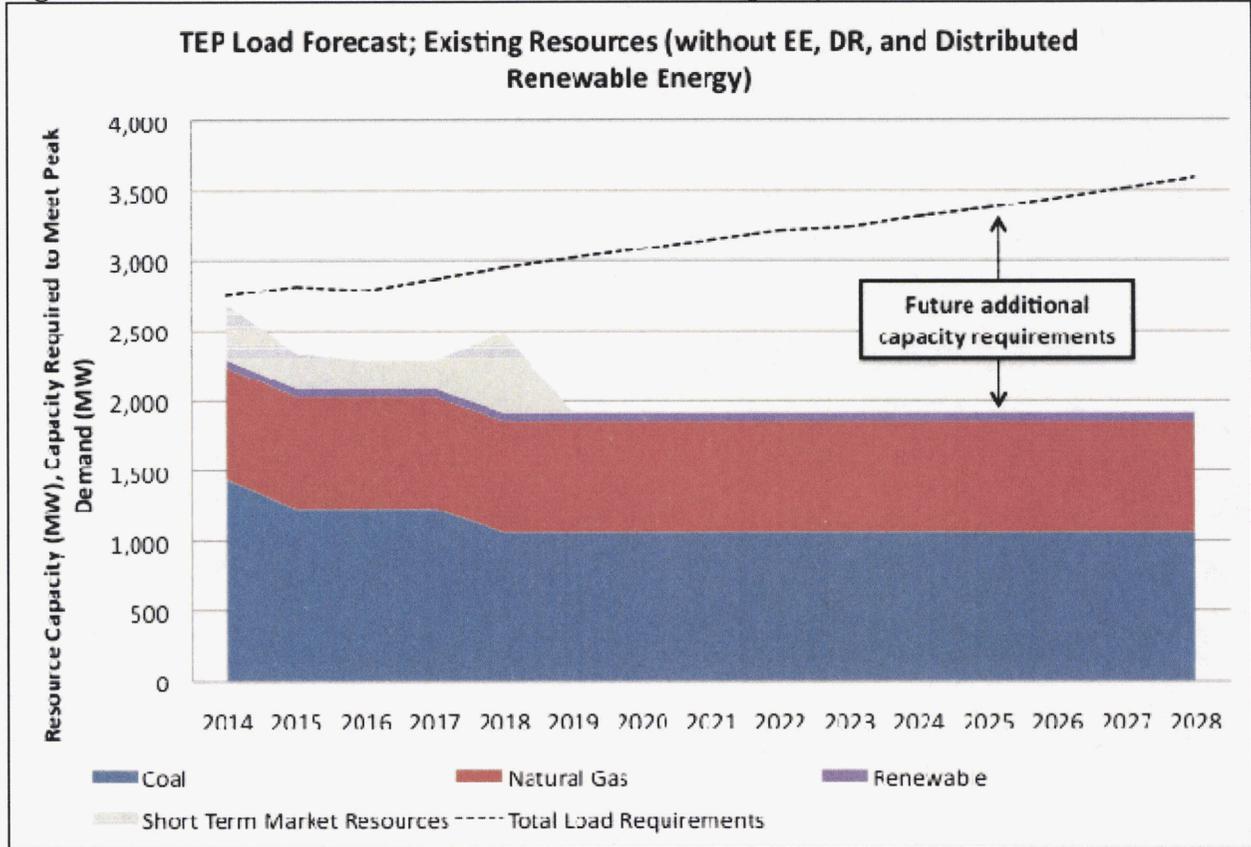
SWEEP reviewed the Tucson Electric Power Company's (TEP) 2014 Integrated Resource Plan (IRP) to examine the role energy efficiency (EE) and demand response (DR) programs play in meeting the future electric needs of TEP customers. Below we provide a summary of our major findings for TEP.

Finding #1: TEP Needs Additional Energy Resources to Meet its Load Obligations

According to TEP's 2014 IRP, TEP will need additional capacity and energy resources to meet its load obligations. Indeed, TEP's 2014 IRP clearly shows that TEP has a shortfall in generation capacity over the coming years. Figure SWEEP-6 shows this capacity shortfall in more detail. The black dotted line represents TEP's total capacity requirement (its firm load obligations plus a 15% planning reserve margin), based on the load forecast in TEP's 2014 IRP. The colored regions below the black dotted line show the capacity contributions of TEP's existing generation resources. The gap between the black dotted line and the capacity contributions of TEP's

existing generation resources represents the additional capacity that TEP will need in order to fulfill its load obligations and meet customer needs.

Figure SWEEP-6: TEP’s 2014 IRP Demonstrates a Capacity Shortfall in the Coming Years



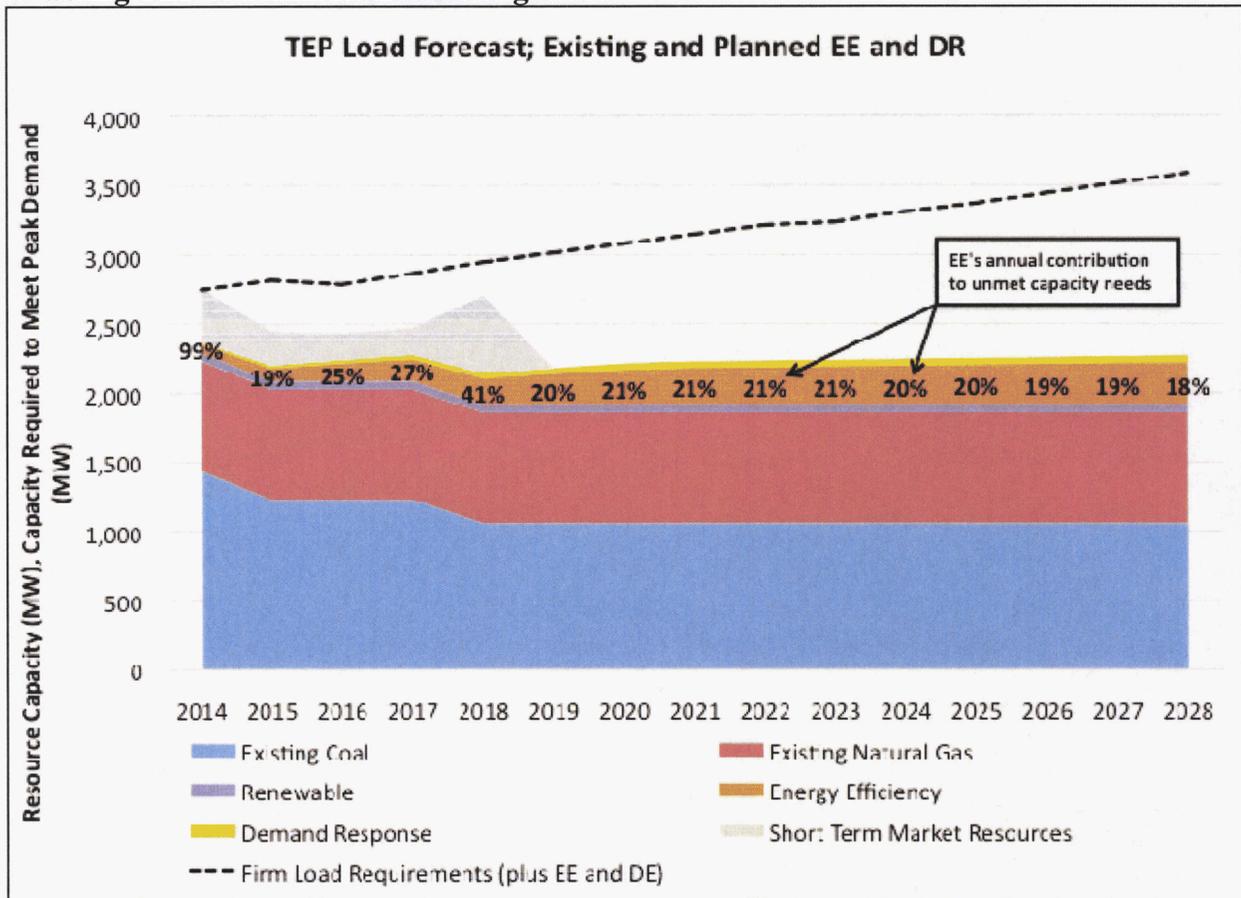
Data Sources: TEP 2014 IRP

Finding #2: Energy Efficiency Programs Make Significant Contributions Toward Enabling TEP to Fulfill its Load Obligations and Address its Capacity Shortfall.

EE programs make significant contributions toward enabling TEP to fulfill its load obligations and address its capacity shortfall. As shown in Figure SWEEP-7, Demand Side Management (DSM) programs contribute a major share of TEP’s future additional capacity resources to meet capacity needs. Figure SWEEP-7 illustrates the fraction EE contributes to additional capacity resources to meet the unmet capacity needs in each year over this time horizon. As you can see, EE contributes ~22% of TEP’s future additional capacity resources in from 2015-2028. In some years, such as 2018, DSM’s contribution to TEP’s additional capacity resources is as high as 41%.

Note that TEP assumes in its resource plan that EE resource contributions will level off after 2020, the final year of the EE Standard, and that less EE will be implemented post-2020. TEP has not provided any documentation for this assumption. SWEEP recommends that all cost-effective EE should continue to be pursued and implemented, including after the last year of the current EE Standard.

Figure SWEEP-7: Energy Efficiency Programs Make Significant Contributions Toward Enabling TEP to Fulfill its Load Obligations



Data Sources: TEP 2014 IRP.

Finding #3: From a ratepayer perspective, energy efficiency is the best and lowest-cost energy resource TEP can use to meet the needs of its customers

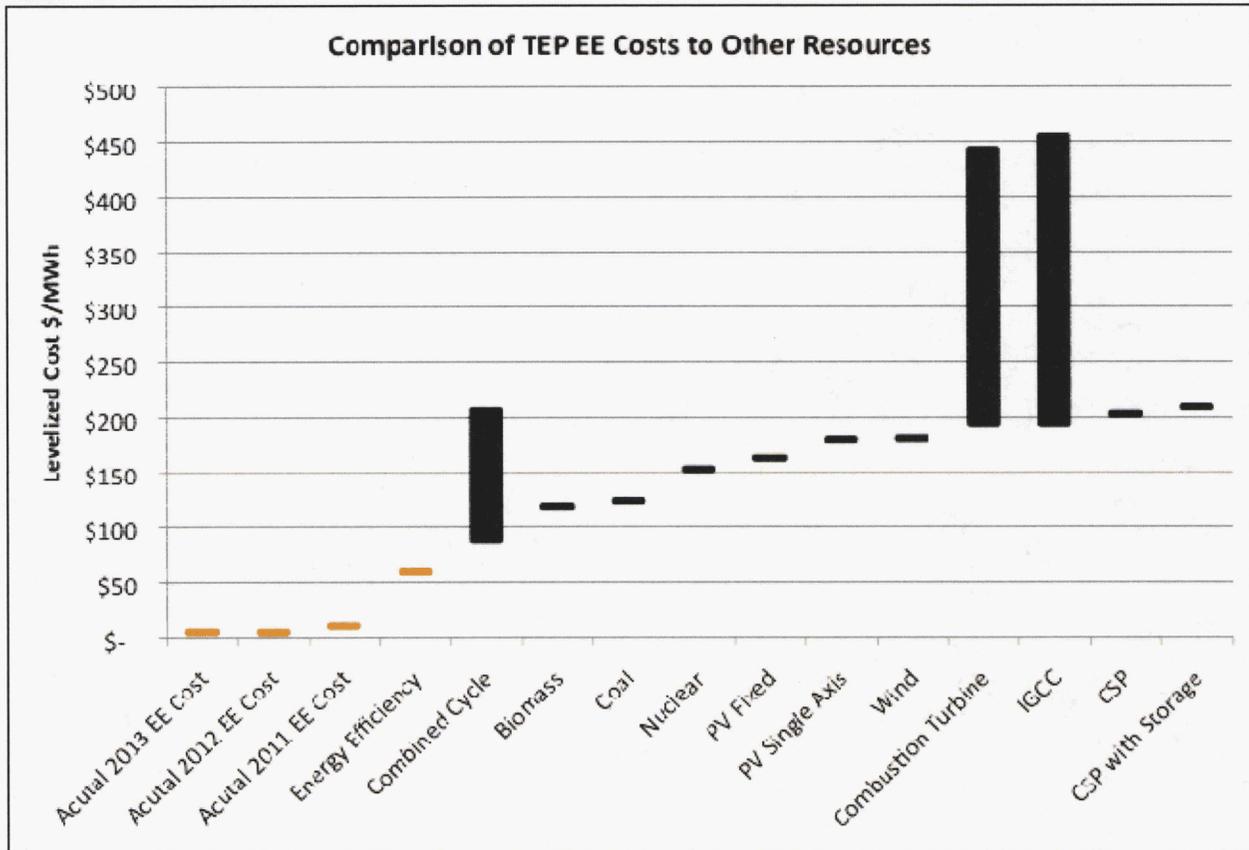
From a ratepayer perspective, EE is the best and lowest-cost energy resource TEP can use to meet the needs of its customers. As documented in TEP’s 2014 IRP and annual demand side management plans, cost-effective EE is the lowest cost, cleanest, least-risky, and most economy-friendly resource. As shown in Figure SWEEP-8, investing in other resources would be more costly for ratepayers. For example, TEP estimates the next most affordable energy resource (a combined cycle natural gas plant) to 1.5-to-2 times more expensive than EE.

Notably TEP is estimating EE costs that are several times the actual cost of EE in recent years (see Figure SWEEP-8, at the lower left which shows TEP’s actual cost of EE programs from 2011-2013). EE is still the lowest cost resource even when TEP estimates costs that are far higher than actual experience-to-date.

In fact, TEP plans to rely increasingly and significantly on natural gas to meet customer needs. For example, in 2020 and 2025 the TEP-planned natural gas additions are 4-times the 2020 and 2025 energy efficiency additions, respectively. Apparently this is TEP’s plan as represented in its

IRP even though additional EE is available post-2020 and EE is much lower cost than the natural gas additions, as shown in Figure SWEEP-8.

Figure SWEEP-8: Energy Efficiency is the Least Expensive Energy Resource Available to Meet Customer Needs



Data Sources: TEP 2014 IRP, TEP 2011-2013 Demand Side Management Report

Finding #4: TEP's IRP Clearly Demonstrates the Need for Energy Efficiency Investment

The TEP 2014 IRP clearly demonstrates the need to invest in energy efficiency based on TEP's actual customer needs as established in TEP's 2014 IRP. If TEP under-invests in the EE resources documented in the 2014 IRP, and then has to add other resources to substitute for the energy efficiency resources identified in the TEP IRP, the total costs for TEP customers will be significantly higher (see SWEEP-8).

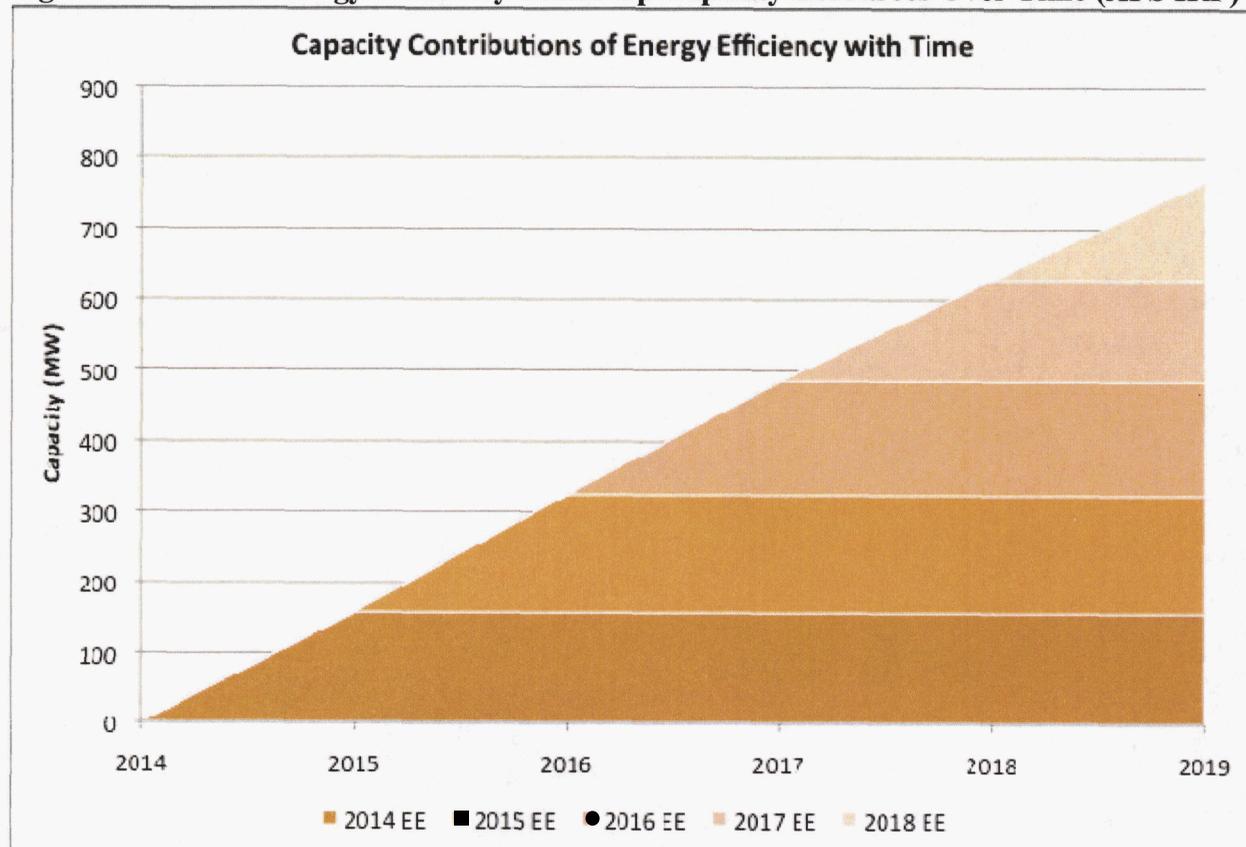
III. How Energy Efficiency Programs Meet Capacity Needs by Building Up the Energy Efficiency Resource Over Time

The 2014 Integrated Resource Plans (IRPs) of Arizona Public Service Company (APS) and Tucson Electric Power (TEP) illustrate several key points about how energy efficiency (EE) resources meet capacity needs by building up the EE resource over time.

Point #1: Energy Efficiency Resources Build Up Capacity Over Time

EE programs build up capacity resources over time, as customers make decisions on buildings, appliances, and equipment, and as EE measures are installed. For example, when an EE measure such as attic insulation is installed, that attic insulation will deliver capacity benefits in the year that it is installed and in subsequent years (as the insulation is not removed). In this way, EE resources implemented in any one year continue to deliver capacity benefits for multiple years. In addition, EE resources implemented in subsequent years build on the contribution of EE resources implemented earlier. See Figure SWEEP-9, which is based on data in the APS IRP.

Figure SWEEP-9: Energy Efficiency Builds Up Capacity Resources Over Time (APS IRP)



Data Source: APS 2014 IRP.

Point #2: Cost-Effective Energy Efficiency Built Up Over Time Provides Benefits Today

Cost-effective EE programs built up over time provide benefits today in addition to contributing to meet future capacity needs. Indeed, as soon as an EE measure is implemented, it will begin delivering energy, capacity, and other benefits. As a cost-effective resource, the EE programs will result in lower total costs for customers, and the benefits begin to accrue the moment the EE measures are installed. Therefore it does not make economic sense to delay the implementation of cost-effective EE, because delaying the implementation would, by definition, increase total customer costs.

Point #3: Energy Efficiency Resources Reduce Customers' Utility Bills Today

While EE programs are reducing total costs for customers over time, as a cost-effective resource, they are also helping customers to reduce their utility bills today. Customers who install EE measures as a result of the programs receive the direct benefit of a lower utility bill.

Point #4: Energy Efficiency Resources Should Be Built Up Over Time

By design, EE programs often piggyback on market opportunities, such as when customers buy a new home, replace an air conditioner or appliance, or change old or buy new equipment. EE programs are designed to build on and take advantage of these natural market opportunities for two reasons. First, it is easier and more effective to encourage a customer to purchase an EE option or upgrade when they are already thinking of making a purchase. Second, and very importantly, the cost to ratepayers for financial incentives during a natural market opportunity are lower than if the programs tried to encourage customers to retrofit their buildings. This practice results in lower program costs and lower costs for ratepayers. Therefore it is important for EE programs to "be in the market" and to capture these opportunities in the natural market, in all years, which also contributes to building up the EE resource over time. Each missed opportunity in the market will result in higher utility bills for that customer, and ultimately higher total costs for all ratepayers.

Point #5: Energy Efficiency Programs Help Support and Provide Flexibility for New Innovations and Opportunities

Traditional generation plants are "lumpy" investments. It takes years to build them, and once there is a commitment to building a future plant, the utility or owner cannot easily adjust plans. If the actual load turns out to be less than the forecast, the investment in the lumpy power plant becomes a sunk cost that ratepayers will be expected to pay. During this several year period, innovations and new alternatives generally are not considered or pursued.

EE programs can defer or eliminate the need for some large central-station power plants in the future. EE programs are diverse distributed resources so investments are not lumpy and large sunk costs can be avoided. The EE programs are responsive to changes in load (e.g., increases in new construction projects in the market result in increases in new construction energy savings). They are also flexible in that programs can be ramped up or geo-targeted to particular areas when needed. These characteristics provide more flexibility in system planning and operations. As a result they also support opportunities for new innovations.

Thank you for the opportunity to provide these comments on the 2014 IRPs of APS and TEP, and SWEEP's additional analysis and findings.

RESPECTFULLY SUBMITTED this 1st day of December 2014.

Jeff Schlegel & Ellen Zuckerman
Southwest Energy Efficiency Project

ORIGINAL and 13 COPIES of the foregoing filed this 1st day of December 2014, with Docket Control, and electronically mailed to All Parties of Record.

Appendix SWEEP-2: Decisions Related to Staff-Led Cost Effectiveness Workshops

Decision No. 73089, Pages 58-59 (beginning at Line 19)

IT IS FURTHER ORDERED that to ensure accurate and timely cost-effectiveness analysis through the use of one model and consistent input values, Staff should attempt to retain an independent third-party consultant possibly through entities such as the United States Department of Energy State and Local Energy Efficiency Action Network Technical Assistance Program or the National Association of Regulatory Utility Commissioners State Electricity Regulators Capacity Assistance and Training program, to assist a Staff-led working group, including the Company and interested stakeholders, in (a) exploring effective options for cost-effectiveness analysis models; (b) selecting and securing one model to be used by the Company and Staff for cost-effectiveness analysis; (c) resolving any differences in key input values used in the analysis; (d) documenting the key input values in a Technical Reference Manual to be updated by the Company and filed with each Implementation Plan; and (e) creating templates for Implementation Plans and annual progress and status reports.

Decision No. 72747, Pages 58-59 (beginning at Line 5)

IT IS FURTHER ORDERED that to ensure accurate and timely cost-effectiveness analysis through the use of one model and consistent input values, Staff should attempt to retain an independent third-party consultant possibly through entities such as the United States Department of Energy State and Local Energy Efficiency Action Network Technical Assistance Program or the National Association of Regulatory Utility Commissioners State Electricity Regulators Capacity Assistance and Training program, to assist a Staff-led working group, including UNS Electric, Inc. and interested stakeholders, in (a) exploring effective options for cost-effectiveness analysis models; (b) selecting and securing one model to be used by UNS Electric, Inc. and Staff for cost-effectiveness analysis (c) resolving any differences in key input values used in the analysis; (d) documenting the key input values in a Technical Reference Manual to be updated by UNS Electric, Inc. and filed with each Implementation Plan; and (e) creating templates for Implementation Plans and annual progress and status reports.

Decision No. 73229, Pages 19-20 (beginning at Line 25)

IT IS FURTHER ORDERED that to ensure accurate and timely cost-effectiveness analysis through the use of one model and consistent input values, Staff should attempt to retain an independent third-party consultant to assist a Staff-led working group, including the Company and interested stakeholders, in (a) exploring effective options for cost-effectiveness analysis model; (b) selecting and securing one model to be used by the Company and Staff for cost-effectiveness analysis; (c) resolving any differences in key input values used in the analysis; and (d) creating templates for Implementation Plans and annual progress and status reports.

ⁱ Lawrence Berkeley National Laboratory, "The Total Resource Cost of Saved Energy for Utility Customer-Funded Energy Efficiency Programs," Presented at the November 17, 2014, NARUC Annual Meeting, http://emp.lbl.gov/sites/all/files/TR%20CSE_NARUC_111714_Final%20Release.pdf

ⁱⁱ See the American Council for an Energy Efficiency Economy's *The State Energy Efficiency Scorecard* from 2009-2013

ⁱⁱⁱ See the Annual Demand Side Management Reports of Arizona Public Service and Tucson Electric Power from 2011-2013.

^{iv} Ibid.

^v Arizona Public Service, "APS DSM Program Overview," Presented at the 2013 ACEEE National Conference on Energy Efficiency as a Resource.

^{vi} Examples include: Wall Street Journal, "APS and Unisource AZ Utilities Get National Awards for Energy Efficiency," <http://online.wsj.com/article/PR-CO-20130328-914083.html>; Phoenix Business Journal, "APS, Meritage, Foundation for Senior Living tabbed for Energy Star awards,"

<http://www.bizjournals.com/phoenix/news/2013/03/26/aps-meritagefoundation-for-senior.html>; Greentech

Media, "Multifamily Housing: A \$3.4B US Energy Efficiency Opportunity,"

<http://www.greentechmedia.com/articles/read/multifamily-housing-a-3.4b-u.s.-energy-efficiency-opportunity>

^{vii} See Annual Demand Side Management Reports of Arizona Public Service from 2011-2013.

^{viii} See Annual Demand Side Management Reports of Arizona Public Service from 2010-2013.

^{ix} Southwest Energy Efficiency Project, "The \$20 Billion Dollar Bonanza: Best Practice Electric Utility Energy Efficiency Programs and Their Benefits for the Southwest,"

http://swenergy.org/publications/20BBonanza/20B_Bonanza-COMplete_Report-Web.pdf; Lawrence

Berkeley National Laboratory, "Analysis of the Energy Efficiency Standard (EES) and Decoupling on Arizona Public Service and Tucson Electric Power."

^x Southwest Energy Efficiency Project, "The \$20 Billion Dollar Bonanza: Best Practice Electric Utility Energy Efficiency Programs and Their Benefits for the Southwest,"

http://swenergy.org/publications/20BBonanza/20B_Bonanza-COMplete_Report-Web.pdf;

^{xi} See Docket E-00000J-13-0375

^{xii} Southwest Energy Efficiency Project, "The \$20 Billion Dollar Bonanza: Best Practice Electric Utility Energy Efficiency Programs and Their Benefits for the Southwest,"

http://swenergy.org/publications/20BBonanza/20B_Bonanza-COMplete_Report-Web.pdf;

^{xiii} For example, SWEEP has recommended the development of a 3-5 year action plan, with independent analysis, and with the opportunity for public review and comment, which the Commission would act on.

^{xiv} See video of 2014 Arizona Corporation Commission IRP workshop proceedings on November 7, 2014.

^{xv} See video of 2014 Arizona Corporation Commission IRP workshop proceedings on November 7, 2014.

^{xvi} Downs et al. 2013

^{xviii} American Council for an Energy Efficient Economy, "Comments of the American Council for an Energy Efficient Economy," <http://images.edocket.azcc.gov/docketpdf/0000158370.pdf>

^{xix} See March 18, 2014, Workshop on Energy Efficiency and Integrated Resource Planning

^{xx} Ryan Randazzo, "Arizona's approach to energy efficiency programs is conservative,"

<http://www.azcentral.com/story/money/business/2014/11/14/arizonas-approach-energy-efficiency-programs-conservative/19036219/>

^{xxi} See April 17, 2014, Workshop on Energy Efficiency and Integrated Resource Planning

^{xxii} See Code of Virginia, C. 821, §§ 56-576, approved April 18, 2012.

^{xxiii} See ACC Docket E-01345A-11-0232

^{xxiv} Arizona Community Action Association, "Comments of the Arizona Community Action Association," <http://images.edocket.azcc.gov/docketpdf/0000158146.pdf>