



0000158673

COMMISSIONERS
BOB STUMP, Chairman
GARY PIERCE
BRENDA BURNS
BOB BURNS
SUSAN BITTER SMITH

RECEIVED
AZ CORP COMMISSION
DOCKET CONTROL

Arizona Corporation Commission
DOCKETED

DEC 15 2014

2014 DEC 15 AM 9 14

DOCKETED BY

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

DOCKET NO. E-00000V-13-0070

ORIGINAL

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

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

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

SWEEP previously filed comments on the role of energy efficiency (EE) and demand response (DR) programs in the 2014 IRPs of the Arizona Public Service Company (APS) and the Tucson Electric Power Company (TEP).¹ In our comments we concluded, based on the utilities' own data contained in the APS and TEP IRPs, that:

1. APS and TEP need additional resources to meet load obligations over the next 15 years.
2. EE and DR programs play a significant role in enabling APS and TEP to meet these obligations.
3. APS and TEP both identify EE as the least expensive 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 resources that are comparatively more expensive than EE. 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.

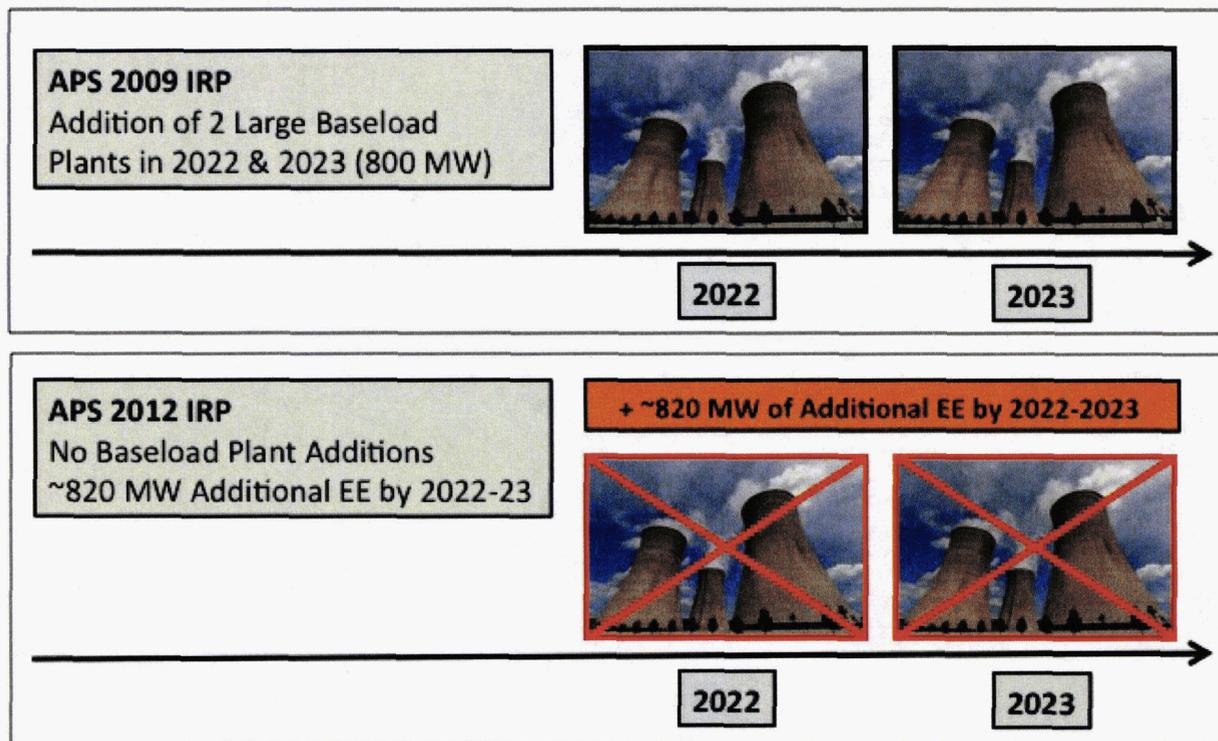
These supplemental comments are meant to expand on our initial filing and offer a few examples of how EE plays an important role in avoiding investment in more costly generation alternatives.

¹ See the comments of the Southwest Energy Efficiency Project filed on December 1, 2014:
<http://images.edocket.azcc.gov/docketpdf/0000158369.pdf>

Energy Efficiency Avoids Investment in Large Baseload Plants

A comparison of past and recent APS IRPs illustrates how investment in EE in customer buildings and facilities has avoided investment in large baseload plants and the associated higher costs for APS customers. For example, in its 2009 IRP, APS planned to invest in two large baseload plants in 2022 and 2023, respectively, to add 800 MW in capacity. In later IRPs, APS avoided these investments, by investing in equivalent EE capacity, at lower cost ratepayers. See Figure SWEEP-1 below.

Figure SWEEP-1: Energy Efficiency Avoids Investment in Large Baseload Plants for APS Customers



A comparison of past and more recent IRPs shows that APS avoided investment in large baseload plants by investing in equivalent energy efficiency capacity. Sources: APS 2009 and 2012 IRPs.

Capacity Provided by DSM Investments From 2011-2013 is Greater than Recent Proposed Supply Side Additions that Are Comparatively More Expensive

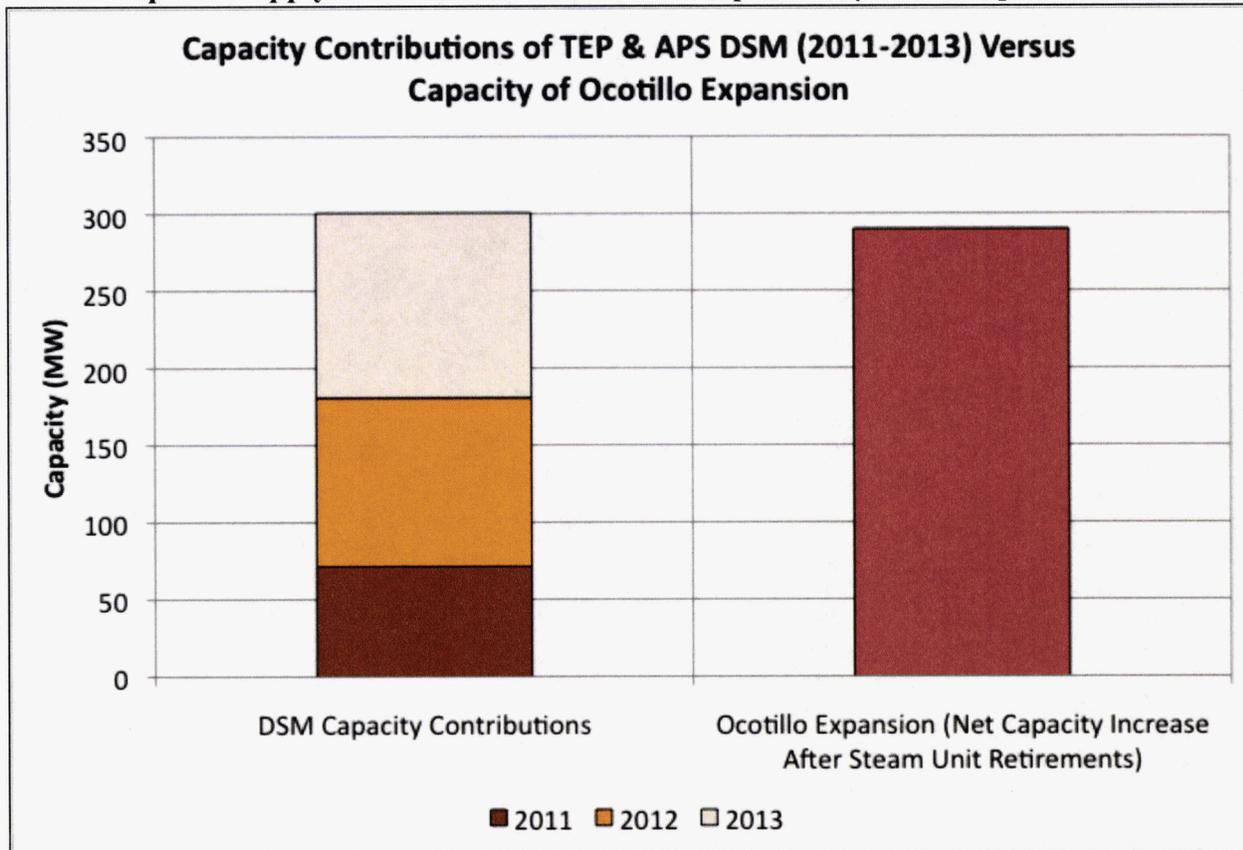
As SWEEP described in its initial comments on APS' and TEP's 2014 IRPs, EE builds capacity resources over time.² Notably, from 2011 to 2013, DSM EE investments by TEP and APS provided more than 300 MW in capacity.³ This capacity contribution is greater than the net capacity increase proposed for the Ocotillo Modernization Project. See Figure SWEEP-2.

² See the comments of the Southwest Energy Efficiency Project filed on December 1, 2014, page 11:

<http://images.edocket.azcc.gov/docketpdf/0000158369.pdf>

³ See the Annual Demand Side Management reports of APS and TEP from 2011-2013. DR investments by APS are not included.

Figure SWEEP-2: Capacity Provided by DSM Investments From 2011-2013 is Greater than Recent Proposed Supply Side Additions that Are Comparatively More Expensive

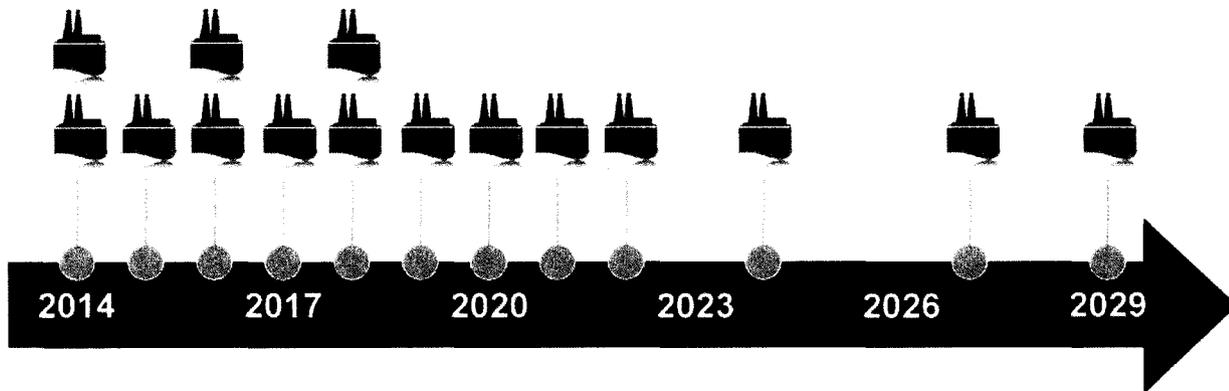


Recent capacity contributions from the DSM portfolios of APS and TEP build up over time and provide capacity amounts that exceed the net capacity increase proposed for the Ocotillo Modernization Project. Source: APS and TEP DSM Reports from 2011-2013 and 2014 APS IRP.

Failure to Invest in Energy Efficiency will Result in Significant Investment in More Expensive Supply Side Resources

In our first round of comments, we examined a hypothetical scenario where APS’ EE investment anticipated in its 2014 IRP is replaced with supply-side resources. We assumed the alternative supply side resource would be a 102MW combustion turbine (such as the one proposed by APS at Ocotillo). Figure SWEEP-3 illustrates the build out of combustion turbine units that would be necessary to provide capacity resources equivalent to the capacity provided by EE documented in APS’ 2014 IRP. As shown in this figure, failure to invest in EE would 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.

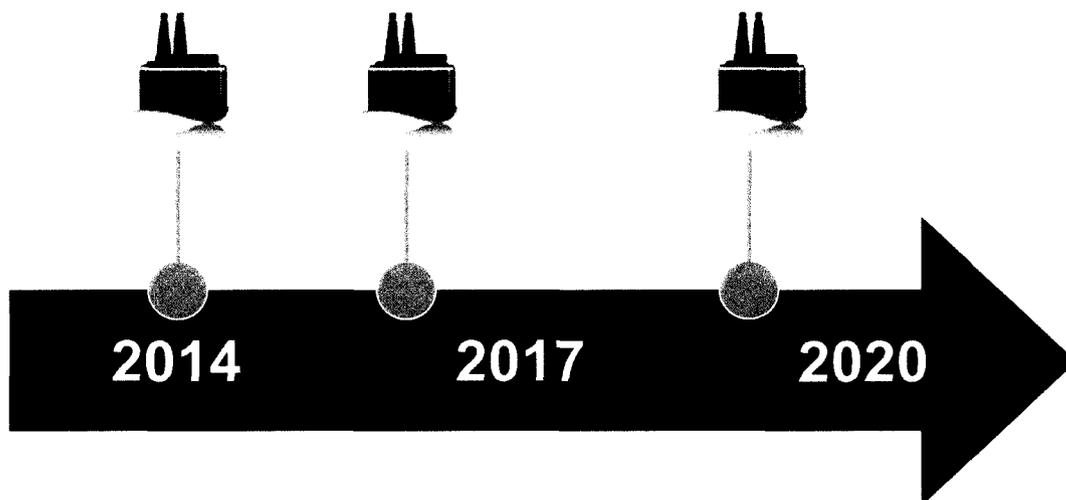
Figure SWEEP-3: Failure to Invest in Energy Efficiency will Result in Significant Investment in More Expensive Supply Side Resources by APS



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

SWEEP also explored what would happen if TEP failed to invest in EE through 2020 (when the EE Standard ends). For consistency with the APS example above, we assumed that the alternative supply side resource would be a 102MW combustion turbine. Figure SWEEP-4 illustrates the build out of combustion turbine units necessary to provide capacity resources equivalent to the capacity provided by EE in TEP’s 2014 IRP through 2020. 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, TEP would need to build 3 combustion turbines through 2020 and would need to commence construction immediately.

Figure SWEEP-4: Failure to Invest in Energy Efficiency through 2020 will Result in Significant Investment in More Expensive Supply Side Resources by TEP



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

Thank you for the opportunity to provide these supplemental comments on the 2014 IRPs of APS and TEP.

RESPECTFULLY SUBMITTED this 15th day of December 2014.

Jeff Schlegel & Ellen Zuckerman
Southwest Energy Efficiency Project

ORIGINAL and 13 COPIES of the foregoing filed this 15th day of December 2014, with Docket Control, and electronically mailed to All Parties of Record.