

**ORIGINAL
OPEN MEETING**



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**MEMORANDUM
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Arizona Corporation Commission
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AZ CORP COMMISSION
DOCKET CONTROL

TO: THE COMMISSION

FROM: Utilities Division

DATE: December 30, 2010

RE: ARIZONA PUBLIC SERVICE COMPANY – APPLICATION FOR APPROVAL OF
A RESIDENTIAL DEMAND RESPONSE PILOT PROGRAM
(DOCKET NO. E-01345A-10-0075)

On March 1, 2010, Arizona Public Service Company (“Company” or “APS”) filed an application (“Application”) for approval of a demand response (“DR”) pilot program for residential customers as required by Decision No. 71448 issued December 30, 2009. In the Decision, the Arizona Corporation Commission (“Commission”) ordered the Company to file a plan to address the addition of at least 250 Megawatts of Commercial, Industrial or Residential DR, and develop a proposed residential DR tariff and plan for deploying in-home metering devices that provide transparent information regarding real-time pricing of power and real-time renewable energy generation. The Company is seeking approval of its proposed residential Home Energy Information Pilot Program (“HEI Pilot”) and its associated Experimental Service Schedule 16 (“Schedule 16”).

APS expects that the HEI Pilot will be fully deployed within 60 to 90 days of Commission approval of Schedule 16 and the HEI Pilot and be operational in time for the 2011 summer season. The HEI Pilot is planned to be conducted through the 2011 and 2012 summer seasons, and Schedule 16 is proposed to be available through December 31, 2012. Beginning in March of 2011, and with each Demand Side Management (“DSM”) report thereafter, the Company will report on the progress and results of the pilot program.

Proposed Schedule 16 lists the following five options that the HEI Pilot would make available to APS’ residential customers:

Table 1

Option	Description	Target Participation
A	Critical Peak Pricing With Customer Energy Control Device	200 Customers
B	In-Home Energy Information Display	200 Customers
C	Smart Thermostat or Control Switch With APS Direct Load Control of Air Conditioner	200 Customers
D	Qualifying Smart Phone, Personal Digital Assistant, and Computer Energy Information	200 Customers
E	Pre-Pay Energy Service	2,000 Customers

The attached Staff Exhibit 1 summarizes and describes the five program options under APS' proposed Schedule 16.

HEI Pilot

APS is seeking Commission approval of the proposed HEI Pilot, which the Company describes as:

“... a comprehensive residential DR pilot program that includes a technical assessment component for in-home devices that would provide participating residential customers with transparent information regarding their energy use and costs.”¹

It is noteworthy that APS identifies the purpose of the HEI Pilot as a way:

“... to test a variety of technologies that are currently available, as well as customer response to both the technologies and the DR program design, which in turn, will provide essential information for rolling out a full-scale program in the future.”²

Staff believes that the purpose of the proposed HEI Pilot is primarily to gather information on implementing DR. The following references support this finding:

- The Company's current resource plans do not indicate a need for summer peaking capacity resources until 2017; and, in later filings, APS will propose further plans for deployment considering the overall resource plan, the cost effectiveness of the potential DR measures, and the time necessary for customer recruitment and deployment (APS Exhibit B, DR Plan Report at p. 1).
- APS provides no cost-effectiveness test data with the filing, citing Commission-adopted Electric Energy Efficiency Rule R14-2-2412(G), which explicitly exempts research and development pilot programs from the test (Application at Footnote 18 and APS Exhibit B, DR Plan Report at Footnote 5).
- APS states that even though it is possible to achieve 250 Megawatts of DR by the end of 2016, the Company is not proposing full implementation of new DR measures at this time (Application, p. 4, lines 14-16).
- APS characterizes the activities described in the Application as the “initial assessment phase”, and indicates that the Company will seek Commission approval of specific

¹ Application, pp. 1-2, lines 23-1

² Application, p. 2, lines 2-4

programs to achieve the full 250 Megawatt DR requirement subsequent to the initial assessment phase of the HEI Pilot (Application, p. 13, lines 6-8).

The proposed HEI Pilot and Schedule 16 are linked by the five options discussed above; consequently, Staff supports APS seeking approval of the proposed HEI Pilot and companion Schedule 16 at the same time. Staff's Memorandum focuses on the proposed HEI Pilot and Schedule 16, and addresses APS' request for Commission approval of the proposed DR Plan (Application, p.13, line 15). In addition, APS is requesting a Commission order that:

- Authorizes APS to roll-out the Pre-Pay program throughout APS' service territory after the program is determined to be technically feasible.
- Waives A.A.C. R14-2-211 (Termination of Service) for Pre-Pay program participants.
- Authorizes the modification of the HEI Pilot during the pilot period, if necessary.
- Acknowledges that the Company should treat proposed HEI Pilot-related expenses as research and development, and that program costs are to be recovered through the Demand-Side Management Adjustor Clause ("DSMAC").
- Approves up to \$6.0 million for the proposed DR Budget.
- Acknowledges that the DSMAC is an appropriate cost-recovery mechanism for costs incurred under Commission-approved programs contained in the DR Plan; and,
- Authorizes recovery of the revenue requirements of the capital portion of pilot deployment, using the authorized cost of capital, through the DSMAC until the capital investment is included in base rates in a subsequent rate case.

Recommendations

HEI Pilot and Schedule 16

With the exception of the proposed Pre-Pay Energy Service option, Staff recommends Commission approval of the proposed HEI Pilot and Schedule 16 as filed. The proposed Pre-Pay option is addressed under the Pre-Pay Energy Service section below. Staff believes that the proposed HEI Pilot and Schedule 16 are in compliance with the Decision requirement that APS "... shall develop a proposed residential demand response tariff and plan for deploying in-home metering devices and providing transparent information regarding real-time pricing of power"³

³ Decision No. 71448, p. 61, lines 21-23

Staff recommends that the proposed HEI Pilot and Schedule 16 be designated as a DSM research project and non capital-related expenses be recovered through the DSMAC as discussed below. Staff recommends that the recovery of capital-related carrying costs should also be recovered through the DSMAC, but as addressed in more detail below, Staff recommends reducing the estimated carrying costs to reflect the removal of a proposed Pre-Pay program from the proposed HEI Pilot and Schedule 16.

Staff's approval recommendations do not apply to the DR Plan, because the proposed DR Plan includes both residential schedules that have already been approved by the Commission (i.e. Critical Peak Pricing, Rate Schedule CPP-RES and Super Peak Pricing, Rate Schedule ET-SP); and Commercial and Industrial ("C&I") DSM-related programs (e.g. C&I Thermal Energy Storage and Standby Generation) that have not been docketed with the Commission at this time. Consequently, Staff's recommended approval is limited to the proposed HEI Pilot and Schedule 16. The following table summarizes the status of DR Programs contained in the proposed DR Plan Report:

Table 2 (Excludes separately funded R&D Electric Vehicles and Battery Storage programs)

Demand Response Program	MW Reduction by 2016	Status
Residential Direct Load Control	100 – 150	Part of the proposed HEI Pilot
Residential Critical Peak Pricing	2 – 3	Approved by the Commission
Residential Super Peak Pricing	1 – 2	Approved by the Commission
C&I Critical Peak Pricing	30 -40*	Approved by the Commission
C&I Interruptible Rate Rider		With Staff, awaiting an APS Revision
C&I Thermal Energy Storage	2 – 15	Tariff rate to be filed in 2011 general rate case
C&I Standby Generation	50 – 100	In APS research through 2011
Total MW Reduction	185 – 310	

*APS provided the estimated MW reductions combined for these two programs.

Staff recommends that the Commission accept, not approve, the DR Plan as being in compliance with the Decision, and allow APS to continue its Information Technology software and integration research by approving proposed Schedule 16 and the HEI Pilot, excluding the Pre-Pay Energy Service option as discussed below. Staff also recommends that APS be required to seek Commission approval of proposed C&I programs in future dockets before the Commission.

Staff recommends approval of APS' request to modify the HEI Pilot during the pilot period, if necessary due to technical feasibility and customer or program needs; however, it is recommended that all proposed modifications be submitted to the Commission for approval before implementation.

Pre-Pay Energy Service ("Pre-Pay Option")

Staff does not recommend including the Pre-Pay Option in the proposed HEI Pilot or Schedule 16 because the proposed program does not meet any of the goals or definitions of DSM programs as adopted by the Commission. The Electric Energy Efficiency Standards rules

adopted by the Commission in Decision No. 71819 (August 10, 2010) state, in part, that an affected utility shall design each DSM program to be cost effective and accomplish at least Demand Response, Energy Efficiency or Load Management (R14-2-2403). The three DSM goals are explicitly defined as follows:

- Demand Response “means modification of customers’ electricity consumption patterns, affecting the timing or quantity of customer demand and usage, achieved through intentional actions taken by an affected utility or customer because of changes in prices, market conditions, or threats to system reliability.”
- Energy Efficiency “means the production or delivery of an equivalent level and quality of end-use electric service using less energy, or the conservation of energy by end-use customers.” (It should be noted that APS can only earn a performance incentive for an energy efficiency program.)
- Load Management “means actions taken or sponsored by an affected utility to reduce peak demands or improve system operating efficiency, such as direct control of customer demands through affected utility-initiated interruption or cycling, thermal storage, or educational campaigns to encourage customers to shift loads.”

Based on the above definitions, Staff believes that the proposed Pre-Pay Option is not a DSM program and, therefore, that costs of the Pre-Pay Option should not be recovered through the DSMAC.

The Application states that participants may be disconnected under the proposed Pre-Pay Option: a) “Should a participant be disconnected because of lack of funds, that customer does not have to pay a deposit or service establishment fee to reconnect.” (Application, p. 6, lines 16-18); and, b) APS is seeking a waiver of A.A.C. R14-2-211, because pre-pay participants would not receive written notice of disconnection (Id. at lines 18-19).

Staff supports APS’ efforts to reduce its non-payment events and improve access to other payment options for residential customers. However, Staff believes that the funding and review of such a project should take place under a separate docket that includes a proposed tariff for Commission approval. This approach would provide more opportunity for discovery by the Commission, intervenors and Staff. In addition, a separate docket provides more opportunities to find equitable ways to finance a research project that is estimated by APS to cost approximately \$2 million to implement. Staff also believes that any plans to roll-out a permanent, full scale Pre-Pay program throughout APS’ service territory be deferred to a separate future docket to be reviewed by the Commission and interested parties.

Proposed REI Pilot Budgets

APS is proposing approximately \$3,681,000 and Staff is recommending approximately \$2,697,600 for the HEI Pilot program, respectively, as follows:

Table 3

	APS' Proposed Budget	Staff's Proposed Budget	Difference
Non Capital-Related Expenses ⁽¹⁾	\$2,835,000	\$2,498,000	\$337,000
Capital-Related Carrying Costs ⁽²⁾	\$721,015	\$199,639	\$521,376
Consultant Expenses ⁽³⁾	\$125,000	\$0	\$125,000
Total	\$3,681,015	\$2,697,639	\$983,376

(1), (2), and (3) details are addressed below under their respective sections

Recovery of Non Capital-Related Expenses

Non capital-related expenses incurred under Commission-approved programs are recoverable through the DSMAC. Staff recommends approval of the non capital-related expenses in the amount of \$2,498,000, which reflects the removal of Pre-Pay program-related expenses in the amount of \$337,000 (Table 3). The estimated non capital-related budget through CY 2011 is detailed as follows:

Table 4 Residential HEI Pilot Estimated Budget Through CY 2011

Rebates & Incentives ⁽¹⁾	\$557,000
Training & Tech Assistance	\$0
Consumer Education	\$200,000
Program Implementation	\$1,113,000
Program Marketing	\$200,000
Planning & Administration	\$565,000
MER ⁽²⁾	\$200,000
Total	\$2,835,000 Less \$337,000= \$2,498,000 ⁽³⁾

(1) Includes equipment & installation, and home energy audits; (2) Measurement, Evaluation & Research; (3) Pre-Pay \$ removed

Recovery of Capital-Related Carrying Costs

APS submitted support for estimated capital-related costs in the amount of \$3,019,900, with carrying costs in the amount of approximately \$721,000, for proposed HEI Pilot-related communications equipment. APS describes these costs as new information technology software and integration efforts needed to implement the components of the proposed HEI Pilot. APS further described the roughly \$3 million costs as follows: approximately \$2 million of the estimated budget is for the proposed Pre-Pay program, and the remaining balance is required for

Demand Response and Home Area Network functions. Based on Staff's recommendation regarding the removal of the proposed Pre-Pay program, estimated capital-related costs associated with the proposed HEI Pilot would be reduced to \$1,019,900 (\$3,019,900 - \$2,000,000). Utilizing Staff's recommended authorized cost of capital of 8.58 percent instead of APS' recommended 13.25 percent, Staff estimates that the capital-related carrying costs would be approximately \$199,600 (Table 3), or a reduction of approximately \$521,000 when compared to APS' requested amount of approximately \$721,000 (see Staff Exhibit 2 attached). Staff therefore recommends that the Commission approve recovery of approximately \$199,600 in capital-related carrying costs through the DSMAC.

Staff supports using the authorized 8.58 percent cost of capital (Attachment A) for the following reasons:

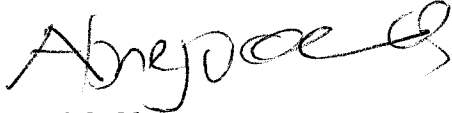
- APS proposed using the authorized cost of capital in its Application (p. 12, line 14).
- In Docket No. E-01345A-09-0338, APS' Renewable Energy Standard Implementation Plan, APS proposed that the cost of ownership or revenue requirement for the AZ Sun Program be determined using the then current authorized cost of capital (p. 12, lines 19-21).
- Staff's review of the APS June 12, 2009 Settlement Agreement ("Agreement") and its Renewable Energy Section 15.7, indicates that the pre-tax weighted average cost of capital should be used to determine revenue requirements associated with capital-related projects. The only pre-tax weighted average cost of capital referenced in the approved Agreement is 8.58 percent (Attachment A). In addition, Sections 4.1 and 4.2 of the approved Agreement discuss the components of the cost of capital, but they are the same components shown on Attachment A that produce the 8.58 percent weighted average cost of capital. It should be noted that Section 15.7 also states that APS shall not seek to recover Construction-Work-In-Progress ("CWIP") related to any of the renewable projects required by Section 15. Accordingly, Staff recommends that the same CWIP restrictions apply to APS' recovery of capital-related costs incurred under Commission-approved DSM programs.

Recovery of Consulting Expenses

Table 3 includes an APS-proposed \$125,000 consultant expense that Staff recommends be removed from the proposed residential HEI Pilot program. Staff discovered that the proposed consultant expenses were slated by APS to fund additional research into the feasibility of developing C&I Thermal Energy Storage and Standby Generation programs, which are not a part of the proposed residential HEI Pilot program. APS will be pursuing these two C&I programs under separate future dockets with the Commission.

Summary of Staff's Proposed Budget Adjustments

Staff's recommended adjustments total approximately \$983,000, thereby reducing APS' proposed HEI Pilot budget from approximately \$3,681,000 to \$2,697,600 (Table 3).



for

Steven M. Olea
Director
Utilities Division

SMO:WHM:lh\CH

ORIGINATOR: William H. Musgrove

Settlement Fair Value Rate of Return
12/31/07 Test Year
(\$ in Thousands)

Attachment A

Line	Capital Structure	Amount	%	Cost Rate	Weighted Avg	Line
	Weighted Average Cost of Capital					
1.	Short-Term Debt	\$ -	0.00%	0.00%	0.00%	1.
2.	Long-Term Debt	2,886,741	46.21%	5.77%	2.67%	2.
3.	Common Stock Equity	3,360,185	53.79%	11.00%	5.92%	3.
4.	Total	<u>\$ 6,246,926</u>	<u>100.00%</u>		<u>8.58%</u>	4.
	Fair Value Rate of Return					
5.	Short-Term Debt	\$ -	0.00%	0.00%	0.00%	5.
6.	Long-Term Debt	2,579,505	33.65%	5.77%	1.94%	6.
7.	Common Stock Equity	3,002,630	39.17%	11.00%	4.30%	7.
8.	Capital Financing from OCRB	5,582,135				8.
9.	Appreciation above OCRB not recognized on utility's books	2,083,592	27.18%	1.50%	0.41%	9.
10.	Total Capital supporting FVRB	<u>\$ 7,665,727</u>	<u>100.00%</u>		<u>6.65%</u>	10.
	Fair Value Rate Base vs. Original Cost Rate Base					
11.	Fair Value Rate Base	\$ 7,665,727				11.
12.	Original Cost Rate Base	5,582,135				12.
13.	Difference	\$ 2,083,592				13.

ARIZONA PUBLIC SERVICE COMPANY
PROPOSED RESIDENTIAL DEMAND RESPONSE PILOT PROGRAM
 (Docket No. E-01345A-10-0075)

Exhibit A of Decision No. 71436 (December 18, 2009) proposed the following Rulemaking definitions:

1. Demand Response ("DR") means modification of customers' electricity consumption patterns, affecting the timing or quantity of customer demand and usage, achieved through intentional actions taken by an affected utility or customer because of changes in prices, market conditions, or threats to system reliability (p. 2).
2. Energy Efficiency means the production or delivery of an equivalent level and quality of end-use electric service using less energy, or the conservation of energy by end-use customers (p. 3).
3. Load Management means actions taken or sponsored by an affected utility to reduce peak demands or improve system operating efficiency, such as direct control of customer demands through affected utility-initiated interruption or cycling, thermal storage, or educational campaigns to encourage customers to shift loads (p. 4).

HOME ENERGY INFORMATION PILOT PROGRAM ("HEI PILOT")

Program Options: →	Critical Peak Pricing W/Energy Control Device*	In-Home Energy Information Display*	Smart Thermostat/Load Control Of Air Conditioner*	Smart Communications Devices*	Pre-Pay Energy Service*
Program Description and Features	APS installs a device that automatically responds to a critical event. The device is attached to the thermostat to control energy usage by the air conditioner. Customers are notified of critical events by e-mail, phone or text message one day in advance. Customers may override a pre-programmed response.	APS installs a device that communicates with participants' smart meters and provides real-time or near-time energy cost and usage information. The program may identify communication issues that exist between smart meters and display units.	APS installs a smart thermostat or control that will allow APS to remotely control the thermostat setting during periods of extremely high demand for power. Customers may override APS remote control during critical events.	This program requires participants to own a cellular smart phone, personal digital device or PC w/broadband connectivity to the Internet. APS will provide an energy information application that enables customers to access energy cost and usage data; PC technology may facilitate communications with smart meters.	Pre-pay participants periodically pay for their energy in advance, by phone, mail, on-line, or in person at an APS office, authorized payment location or kiosk. Participants disconnected due to a lack of funds do not have to pay a deposit or service establishment fee to reconnect.
Conforms to Definition(s)	Demand Response and Load Management	Demand Response and Load Management	Demand Response and Load Management	Indirectly related to DR and Load Management with the opportunity to link customer-owned communications equipment with real time energy data.	Not applicable to any of the definitions.

*Advanced Metering Infrastructure ("AMI") meters will be provided to all customers who participate in one of the Demand Response programs (March 2010 APS Demand Response Plan Report, p. 7)

STAFF RECOMMENDED CAPITAL-RELATED 2011 CARRYING COSTS

Staff Exhibit 2

APS HEI Pilot Program (With Pre-Pay Option)

(APS Proposed Amortization and Cost of Capital)

Monthly Amortization of Plant and RORB:

Oct-10	\$377,488	13.25%	\$4,168
Nov-10	\$754,975	13.25%	\$8,336
Dec-10	\$1,132,463	13.25%	\$12,504
Jan-11	\$1,509,950	13.25%	\$16,672
Feb-11	\$1,887,438	13.25%	\$20,840
Mar-11	\$2,264,925	13.25%	\$25,009
Apr-11	\$2,642,413	13.25%	\$29,177
May-11	\$3,019,900	13.25%	\$33,345
	RORB Sum----->		\$150,051

Monthly Depreciation of Plant and RORB:

			\$3,019,900	(Rate Base Beginning June 1)
End of	<u>Depreciation</u>	<u>RORB</u>	<u>Rate Base</u>	<u>Deferred Taxes</u>
Jun-11	\$50,332	\$32,820	\$2,972,409	\$2,840
Jul-11	\$50,332	\$32,296	\$2,924,917	\$2,840
Aug-11	\$50,332	\$31,772	\$2,877,426	\$2,840
Sep-11	\$50,332	\$31,247	\$2,829,934	\$2,840
Oct-11	\$50,332	\$30,723	\$2,782,443	\$2,840
Nov-11	\$50,332	\$30,198	\$2,734,951	\$2,840
Dec-11	\$50,332	\$29,674	\$2,687,460	\$2,840
Sums	\$352,322	\$218,730		

Cumulative RORBs

\$368,782

Deprec + RORBs

\$721,103

(APS 2011 Annual Carrying Costs)

APS HEI Pilot Program (Without Pre-Pay Option)

(Staff Proposed Amortization and Cost of Capital)

Monthly Amortization of Plant and RORB:

	\$127,488	8.58%	\$912
	\$254,975	8.58%	\$1,823
	\$382,463	8.58%	\$2,735
	\$509,950	8.58%	\$3,646
	\$637,438	8.58%	\$4,558
	\$764,925	8.58%	\$5,469
	\$892,413	8.58%	\$6,381
	\$1,019,900	8.58%	\$7,292
	RORB Sum----->		\$32,815

Monthly Depreciation of Plant and RORB:

			\$1,019,900	(Rate Base Beginning June 1)
End of	<u>Depreciation</u>	<u>RORB</u>	<u>Rate Base</u>	<u>Deferred Taxes</u>
Jun-11	\$16,998	\$7,178	\$1,003,861	\$959
Jul-11	\$16,998	\$7,063	\$987,822	\$959
Aug-11	\$16,998	\$6,948	\$971,783	\$959
Sep-11	\$16,998	\$6,834	\$955,744	\$959
Oct-11	\$16,998	\$6,719	\$939,704	\$959
Nov-11	\$16,998	\$6,604	\$923,665	\$959
Dec-11	\$16,998	\$6,490	\$907,626	\$959
Sums	\$118,988	\$47,835		

Cumulative RORBs

\$80,650

Deprec + RORBs

\$199,639

(Staff 2011 Annual Carrying Costs)

Reduction in Annual Capital-Related Carrying Costs (APS less Staff)

\$521,465

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BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES
Chairman
GARY PIERCE
Commissioner
PAUL NEWMAN
Commissioner
SANDRA D. KENNEDY
Commissioner
BOB STUMP
Commissioner

IN THE MATTER OF THE APPLICATION
OF ARIZONA PUBLIC SERVICE
COMPANY FOR APPROVAL OF A
RESIDENTIAL DEMAND RESPONSE
PILOT PROGRAM

DOCKET NO. E-01345A-10-0075
DECISION NO. _____
ORDER

Open Meeting
January 11 and 12, 2011
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Arizona Public Service Company (“APS” or “the Company”) is certificated to provide electric service as a public service corporation within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission (“Commission”).
2. APS provides service in the counties of Apache, Cochise, Coconino, Gila, La Paz, Maricopa, Navajo, Pinal, Yavapai and Yuma. The Company services over 1.1 million customers in Arizona, including approximately 984,000 Residential and 120,000 Commercial customers.
3. On March 1, 2010, APS filed an application (“Application”) for approval of a demand response (“DR”) pilot program for residential customers as required by Decision No. 71448, issued December 30, 2009.
4. In the Decision, the Commission ordered the Company to file a plan to address the addition of at least 250 Megawatts of Commercial, Industrial or Residential DR, develop a proposed residential DR tariff and plan for deploying in-home metering devices that provide

1 transparent information regarding real-time pricing of power and real-time renewable energy
2 generation.

3 5. The Company is seeking approval of its proposed residential Home Energy
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5 (“Schedule 16”).

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22 APS’ proposed Schedule 16.

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2 technical assessment component for in-home devices that would
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information regarding their energy use and costs.”¹

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5 “... to test a variety of technologies that are currently available, as
6 well as customer response to both the technologies and the DR
7 program design, which in turn, will provide essential information for
rolling out a full-scale program in the future.”²

8 10. Staff believes that the purpose of the proposed HEI Pilot is primarily to gather
9 information on implementing DR. The following references support this finding:

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13 effectiveness of the potential DR measures, and the time necessary for customer
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² Application, p. 2, lines 2-4

1 and Schedule 16, and addresses APS' request for Commission approval of the proposed DR Plan
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17 Recommendations

18 HEI Pilot and Schedule 16

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 25 pricing of power"³

26 13. Staff recommended that the proposed HEI Pilot and Schedule 16 be designated as a
 27 DSM research project and non capital-related expenses be recovered through the DSMAC as

28 ³ Decision No. 71448, p. 61, lines 21-23

1 discussed below. Staff recommended that the recovery of capital-related carrying costs should also
 2 be recovered through the DSMAC, but as addressed in more detail below, Staff recommended
 3 reducing the estimated carrying costs to reflect the removal of a proposed Pre-Pay program from
 4 the proposed HEI Pilot and Schedule 16.

5 14. Staff's approval recommendations do not apply to the DR Plan, because the
 6 proposed DR Plan includes both residential schedules that have already been approved by the
 7 Commission (i.e. Critical Peak Pricing, Rate Schedule CPP-RES and Super Peak Pricing, Rate
 8 Schedule ET-SP); and Commercial and Industrial ("C&I") DSM-related programs (e.g. C&I
 9 Thermal Energy Storage and Standby Generation) that have not been docketed with the
 10 Commission at this time. Consequently, Staff's recommended approval is limited to the proposed
 11 HEI Pilot and Schedule 16. The following table summarizes the status of DR Programs contained
 12 in the proposed DR Plan Report:

13 **Table 2 (Excludes separately funded R&D Electric Vehicles and Battery Storage programs)**

Demand Response Program	MW Reduction by 2016	Status
Residential Direct Load Control	100 – 150	Part of the proposed HEI Pilot
Residential Critical Peak Pricing	2 – 3	Approved by the Commission
Residential Super Peak Pricing	1 – 2	Approved by the Commission
C&I Critical Peak Pricing	30 -40*	Approved by the Commission
C&I Interruptible Rate Rider		With Staff, awaiting an APS Revision
C&I Thermal Energy Storage	2 – 15	Tariff rate to be filed in 2011 general rate case
C&I Standby Generation	50 – 100	In APS research through 2011
Total MW Reduction	185 – 310	

22 *APS provided the estimated MW reductions combined for these two programs.

23 15. Staff recommended that the Commission accept, not approve, the DR Plan as being
 24 in compliance with the Decision, and allow APS to continue its Information Technology software
 25 and integration research by approving proposed Schedule 16 and the HEI Pilot, excluding the Pre-
 26 Pay Energy Service option as discussed below. Staff also recommended that APS be required to
 27 seek Commission approval of proposed C&I programs in future dockets before the Commission.

28 ...

1 16. Staff recommended approval of APS' request to modify the HEI Pilot during the
2 pilot period, if necessary due to technical feasibility and customer or program needs; however,
3 Staff recommended that all proposed modifications be submitted to the Commission for approval
4 before implementation.

5 **Pre-Pay Energy Service ("Pre-Pay Option")**

6 17. Staff recommended not including the Pre-Pay Option in the proposed HEI Pilot or
7 Schedule 16 because the proposed program does not meet any of the goals or definitions of DSM
8 programs as adopted by the Commission. The Electric Energy Efficiency Standards rules adopted
9 by the Commission in Decision No. 71819 (August 10, 2010) states, in part, that an affected utility
10 shall design each DSM program to be cost effective and accomplish at least Demand Response,
11 Energy Efficiency or Load Management (R14-2-2403). The three DSM goals are explicitly
12 defined as follows:

- 13 • Demand Response "means modification of customers' electricity consumption
14 patterns, affecting the timing or quantity of customer demand and usage,
15 achieved through intentional actions taken by an affected utility or customer
16 because of changes in prices, market conditions, or threats to system
17 reliability."
- 18 • Energy Efficiency "means the production or delivery of an equivalent level and
19 quality of end-use electric service using less energy, or the conservation of
20 energy by end-use customers." (It should be noted that APS can only earn a
21 performance incentive for an energy efficiency program.)
- 22 • Load Management "means actions taken or sponsored by an affected utility to
23 reduce peak demands or improve system operating efficiency, such as direct
24 control of customer demands through affected utility-initiated interruption or
25 cycling, thermal storage, or educational campaigns to encourage customers to
26 shift loads."

23 18. Based on the above definitions, Staff believes that the proposed Pre-Pay Option is
24 not a DSM program and, therefore, that costs of the Pre-Pay Option should not be recovered
25 through the DSMAC.

26 19. The Application states that participants may be disconnected under the proposed
27 Pre-Pay Option: a) "Should a participant be disconnected because of lack of funds, that customer
28 does not have to pay a deposit or service establishment fee to reconnect." (Application, p. 6, lines

1 16-18); and, b) APS is seeking a waiver of A.A.C. R14-2-211, because pre-pay participants would
2 not receive written notice of disconnection (Id. at lines 18-19).

3 20. Staff supports APS' efforts to reduce its non-payment events and improve access to
4 other payment options for residential customers. However, Staff believes that the funding and
5 review of such a project should take place under a separate docket that includes a proposed tariff
6 for Commission approval. This approach would provide more opportunity for discovery by the
7 Commission, intervenors and Staff. In addition, a separate docket provides more opportunities to
8 find equitable ways to finance a research project that is estimated by APS to cost approximately \$2
9 million to implement. Staff also believes that any plans to roll-out a permanent, full scale Pre-Pay
10 program throughout APS' service territory be deferred to a separate future docket to be reviewed
11 by the Commission and interested parties.

12 **Proposed REI Pilot Budgets**

13 21. APS is proposing approximately \$3,681,000 and Staff recommended
14 approximately \$2,697,600 for the HEI Pilot program, respectively, as follows:

15 **Table 3**

	APS' Proposed Budget	Staff's Proposed Budget	Difference
Non Capital-Related Expenses ⁽¹⁾	\$2,835,000	\$2,498,000	\$337,000
Capital-Related Carrying Costs ⁽²⁾	\$721,015	\$199,639	\$521,376
Consultant Expenses ⁽³⁾	\$125,000	\$0	\$125,000
Total	\$3,681,015	\$2,697,639	\$983,376

21 (1), (2), and (3) details are addressed below under their respective sections

22 **Recovery of Non Capital-Related Expenses**

23 22. Non capital-related expenses incurred under Commission-approved programs are
24 recoverable through the DSMAC. Staff recommended approval of the non capital-related expenses
25 in the amount of \$2,498,000, which reflects the removal of Pre-Pay program-related expenses in
26 the amount of \$337,000 (Table 3). The estimated non capital-related budget through CY 2011 is
27 detailed as follows:

28 ...

Table 4 Residential HEI Pilot Estimated Budget Through CY 2011

1	Rebates & Incentives ⁽¹⁾	\$557,000
2	Training & Tech Assistance	\$0
3	Consumer Education	\$200,000
4	Program Implementation	\$1,113,000
5	Program Marketing	\$200,000
6	Planning & Administration	\$565,000
7	MER ⁽²⁾	\$200,000
8	Total	\$2,835,000 Less \$337,000= \$2,498,000 ⁽³⁾

9 (1) Includes equipment & installation, and home energy audits; (2) Measurement, Evaluation & Research; (3) Pre-Pay \$ removed

Recovery of Capital-Related Carrying Costs

11 23. APS submitted support for estimated capital-related costs in the amount of
 12 \$3,019,900, with carrying costs in the amount of approximately \$721,000, for proposed HEI Pilot-
 13 related communications equipment. APS describes these costs as new information technology
 14 software and integration efforts needed to implement the components of the proposed HEI Pilot.
 15 APS further described the roughly \$3 million costs as follows: approximately \$2 million of the
 16 estimated budget is for the proposed Pre-Pay program, and the remaining balance is required for
 17 Demand Response and Home Area Network functions. Based on Staff's recommendation
 18 regarding the removal of the proposed Pre-Pay program, estimated capital-related costs associated
 19 with the proposed HEI Pilot would be reduced to \$1,019,900 (\$3,019,900 - \$2,000,000). Utilizing
 20 Staff's recommended authorized cost of capital of 8.58 percent instead of APS' recommended
 21 13.25 percent, Staff estimates that the capital-related carrying costs would be approximately
 22 \$199,600 (Table 3), or a reduction of approximately \$521,000 when compared to APS' requested
 23 amount of approximately \$721,000 (see Staff Exhibit 2 attached). Staff recommended that the
 24 Commission approve recovery of approximately \$199,600 in capital-related carrying costs through
 25 the DSMAC.

26 24. Staff supports using the authorized 8.58 percent cost of capital (Attachment A) for
 27 the following reasons:
 28

- 1 • APS proposed using the authorized cost of capital in its Application (p. 12, line
2 14).
- 3 • In Docket No. E-01345A-09-0338, APS' Renewable Energy Standard
4 Implementation Plan, APS proposed that the cost of ownership or revenue
5 requirement for the AZ Sun Program be determined using the then current
6 authorized cost of capital (p. 12, lines 19-21).
- 7 • Staff's review of the APS June 12, 2009 Settlement Agreement ("Agreement")
8 and its Renewable Energy Section 15.7, indicates that the pre-tax weighted
9 average cost of capital should be used to determine revenue requirements
10 associated with capital-related projects. The only pre-tax weighted average cost
11 of capital referenced in the approved Agreement is 8.58 percent (Attachment
12 A). In addition, Sections 4.1 and 4.2 of the approved Agreement discuss the
13 components of the cost of capital, but they are the same components shown on
14 Attachment A that produce the 8.58 percent weighted average cost of capital. It
should be noted that Section 15.7 also states that APS shall not seek to recover
Construction-Work-In-Progress ("CWIP") related to any of the renewable
projects required by Section 15. Accordingly, Staff recommended that the same
CWIP restrictions apply to APS' recovery of capital-related costs incurred
under Commission-approved DSM programs.

14 Recovery of Consulting Expenses

15 25. Table 3 includes an APS-proposed \$125,000 consultant expense that Staff
16 recommended be removed from the proposed residential HEI Pilot program. Staff discovered that
17 the proposed consultant expenses were slated by APS to fund additional research into the
18 feasibility of developing C&I Thermal Energy Storage and Standby Generation programs, which
19 are not a part of the proposed residential HEI Pilot program. APS will be pursuing these two C&I
20 programs under separate future dockets with the Commission.

21 Summary of Staff's Proposed Budget Adjustments

22 26. Staff's recommended adjustments total approximately \$983,000, thereby reducing
23 APS' proposed HEI Pilot budget from approximately \$3,681,000 to \$2,697,600 (Table 3).

24 CONCLUSIONS OF LAW

25 1. Arizona Public Service Company is a public service corporation within the meaning
26 of Article XV, Section 2 of the Arizona Constitution.

27 2. The Commission has jurisdiction over Arizona Public Service Company and the
28 subject matter of the application.

1 IT IS FURTHER ORDERED that Arizona Public Service Company may request
 2 modifications to the HEI Pilot during the pilot period, but all proposed modifications shall be
 3 submitted to the Commission for consideration before implementation.

4 IT IS FURTHER ORDERED that this Decision shall become effective immediately.

5

6 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

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8

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CHAIRMAN

COMMISSIONER

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11

12

COMMISSIONER

COMMISSIONER

COMMISSIONER

13

14 IN WITNESS WHEREOF, I, ERNEST G. JOHNSON,
 15 Executive Director of the Arizona Corporation Commission,
 16 have hereunto, set my hand and caused the official seal of
 17 this Commission to be affixed at the Capitol, in the City of
 18 Phoenix, this _____ day of _____, 2011.

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 ERNEST G. JOHNSON
 EXECUTIVE DIRECTOR

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DISSENT: _____

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DISSENT: _____

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28

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