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IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR APPROVAL OF DEMAND RESPONSE PROGRAM	DOCKET NO. E-01345A-08-0569 **REQUEST FOR APPROVAL OF DEMAND RESPONSE PROGRAM**

With this filing, Arizona Public Service Company ("APS" or "Company") is seeking Arizona Corporation Commission ("Commission") approval of a Demand Response ("DR") program for commercial and industrial customers ("C&I Load Management Program"). This filing is made pursuant to Commission Decision No. 69663,[1] in which the Commission ordered APS to file for approval of a cost-effective DR program that the Company believes would be most beneficial to its system and its customers. APS is also seeking acknowledgement that the recovery of costs associated with the C&I Load Management Program will be through the Company's Demand Side Management Adjustment Clause ("DSMAC").

Overview of Program

APS has chosen to use an "aggregator" business model for the C&I Load Management Program because APS does not currently have the systems, resources and experience necessary to directly manage such a DR program. To that end, APS has contracted with Alternative Energy Resources, Inc. ("AER"), a clean energy company that provides demand response programs. When the program is fully operational, AER will provide APS with 100 megawatts ("MW") of load reduction capability during the summer months in APS's Phoenix and Yuma service areas. The C&I Load Management Program will ramp-up over a three-

[1] Issued June 28, 2007.

year period, beginning with 30 MW in June 2010 and increasing to 100 MW by 2012. This program will provide firm load reduction capability, similar to a combustion turbine in availability and run time. The contract requires AER to provide verified, measurable load reductions, which allows APS to view this resource as "firm" capacity for system reliability purposes. APS believes that the contract negotiated with AER is in the best interests of both APS and its customers. Because of the competitive nature of the contract, APS will provide it to Commission Staff pursuant to a confidentiality agreement.

The proposed C&I Load Management Program will offer eligible commercial and industrial customers financial incentives to reduce electricity usage during APS's summer system peak. This system peak reduction will be accomplished through a combination of direct load control and prescribed manual load reduction procedures at the customer's site. APS anticipates that approximately 10,000 customers may ultimately participate in this program. The C&I Load Management Program will be in effect during the peak demand months of June through September beginning in 2010; the DR resource will be available during the peak demand hours of 12 o'clock noon until 8:00 p.m. during those months. As a participant, a customer would agree that upon receiving notice from AER to reduce demand, the customer would reduce energy usage. Incentive payments to customers would be managed by AER and would vary, based on the agreed-upon participation levels of each customer. The program is described in detail in Attachment A.

Because the C&I Load Management Program is a new offering to APS's customers, an extensive customer education and outreach program is necessary to make certain that sufficient numbers of customers participate to provide the load reduction benefits. Additionally, implementation of the program will involve information technology, account management, metering, and grid operations to assure that appropriate interfaces occur. The Company estimates it will take approximately a year to prepare and integrate this new resource. For that reason, APS is requesting that the Commission approve the C&I Load Management Program by April 15, 2009, to ensure that the program is operational by summer 2010.

Program Costs and Cost Recovery

In considering the value of the C&I Management Program, APS analyzed the costs and benefits under both the Societal Cost Test, as required by Decision No. 69663,[2] and under the Program Administrator Test, which reviews the benefits and costs of a potential program from the perspective of the administrator, such as the utility. In both benefit/cost analyses, the ratios are greater than 1.0, indicating that the proposed program is clearly a net benefit to both APS and its customers. Further discussions regarding this analysis are included in Attachment A.

The capacity payments are set forth with specificity in the AER contract. In contrast, the energy payments will only be paid when the DR resource is actually called upon, and may vary from year to year. The amount of the incentive provided to the customer for participating in the program would be part of the agreement between the AER and the customer. In addition to the contract payments, during 2008 and 2009 APS will make expenditures for program development and integration with the Company's Information Systems. By the end of 2008, APS will hire an employee to implement and manage the C&I Load Management Program. Once the program is fully deployed, expenditure levels can be expected to remain relatively flat for the remaining term of the contract. APS proposes to report the annual expenditures of the C&I Load Management Program and program participation to the Commission at the end of each year, pursuant to a confidentiality agreement.

Pursuant to Decision No. 67744,[3] the DSMAC is the appropriate mechanism to recover program costs for the C&I Load Management program, including contract costs and program implementation, operational and management costs, and performance incentives. If the program is approved, APS also requests that the Commission acknowledge that the Company should treat these program costs in the same manner as all other energy efficiency programs, which are flowed through the DSMAC.

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[2] *See* page 154.

[3] Issued April 7, 2005, Docket No. E-01345A-03-0437. *See also* DSMAC Plan for Administration at p. 2.

Conclusion

The proposed C&I Load Management Program is a cost-effective DR program that benefits both the APS electric system and customers, as required by Decision No. 67744. Therefore, APS is requesting that the Commission issue an order that approves the C&I Load Management Program. APS further requests that the Commission acknowledge that the DSMAC is the appropriate cost-recovery mechanism for this program. Finally, APS respectfully requests that the Commission render its decision on this matter by April 15, 2009, so the requisite work can be completed in order to have the C&I Load Management Program operational by summer 2010.

RESPECTFULLY SUBMITTED this 6th day of November, 2008.

PINNACLE WEST CAPITAL CORPORATION
LAW DEPARTMENT

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ATTACHMENT A

REDACTED VERSION
Arizona Public Service Company
Demand Response Program Filing
ATTACHMENT A

Background

In Decision No. 69663, the Arizona Corporation Commission ("ACC" or "Commission") required Arizona Public Service Company ("APS" or "Company") to submit for approval one or more cost effective Demand Response ("DR") or Load Management Programs that the Company believes would be most beneficial to the APS system and its customers.[1] In the Company's June 27, 2008 filing, APS indicated that it was in negotiations with a "short-list" of vendors, and would provide details for a proposed DR program at the successful conclusion of those discussions. Those negotiations are complete, and this filing describes the proposed Commercial & Industrial Load Management Program ("C&I Load Management Program") for which APS is seeking approval. APS is also requesting that the Commission acknowledge that the Demand Side Management Adjustor Clause ("DSMAC") is the appropriate cost-recovery mechanism for this program.

Beginning in early 2007, APS dedicated internal resources to the study of DR programs. Also at that time, APS commissioned a preliminary review of the different forms of DR that could be pursued by the Company. On June 28, 2008, APS filed its Demand Response & Load Management Study ("DR Study") in Docket No. E-01345A-05-0826 in compliance with Decision No. 69663. Based on the nature of the APS system and its customer base, a program targeted at reducing peak load requirements for commercial and industrial ("C&I") customers was identified as a likely cost-effective DR program with near term potential. C&I Load Management Programs would offer C&I customers an incentive when they limit their electricity demand during times of peak demand conditions on the APS system. In addition, in its pending rate case, APS filed two DR pricing programs, the Critical Peak Pricing Pilot and the Residential Super Peak Rate.[2]

APS has chosen to use an "aggregator" business model for the C&I Load Management Program, where a third party DR aggregator contracts with utility customers directly and guarantees APS a reduction of megawatts during specified times. Given that APS does not currently have the systems, resources and experience necessary to directly manage the C&I Load Management Program, and that several companies are already in position to provide these services, contracting with an experienced aggregator would enable the most expeditious ramp-up of curtailable load. The Company believes that an experienced aggregator would be able to address customer concerns, integrate load control technology, and assure high customer satisfaction levels based on their

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[1] Decision No. 69663 (June 28, 2007) at p. 154 (Docket No. E-01345A-05-0826).
[2] Docket No. E-01345A-08-0172. The Company also filed a proposal to divide its main General Service rate, E-32, as well as the TOU option, E-32-TOU, into four separate groupings based on customer peak demand.

knowledge and experience running similar programs for other utilities around the country.

With an aggregator program, APS will be purchasing dispatchable capacity, which is similar in structure to a capacity call option contract, making it comparable to a conventional supply-side resource. Outsourcing for a guaranteed quantity of DR capacity also ensures that APS will pay a known price per megawatt, as opposed to the uncertain economics of developing a new program. In addition, APS negotiated clauses related to capacity guarantees that allow the Company to treat this contract as a "firm" resource for system reliability purposes. To assist with program legitimacy and customer acceptance, the DR program will be branded as an APS program. The aggregator will also be responsible for marketing the program using APS-approved marketing materials, installing and maintaining all equipment, and tracking and reporting program results. APS will perform measurement and verification of load reductions and customer satisfaction, either directly or through a contracted, independent third party.

Request for Proposals

On October 25, 2007, APS issued a targeted Request for Proposals ("RFP") to qualified vendors for DR C&I programs. The RFP specified the following scope and parameters for the DR proposals:

- Aggregator proposal where the Respondent would be responsible for customer marketing, recruiting, and services; communication protocols; product installation, operations, and maintenance; and measurement and verification.
- Minimum load management size: 10 megawatts ("MW").
- Required program availability during the summer months of May through September; APS did entertain proposals for other durations.
- Load reductions were required to be in effect no later than 24 hours after APS notification of a DR event.
- Operation must begin no later than May 1, 2010, and could ramp up over time.
- Respondent must provide on-going real-time data on availability and event performance to APS.
- Any customer in Respondent's offering must be an APS C&I customer that was physically located within either the Greater Phoenix Metropolitan load area or the Yuma load area.

The Company received proposals in December 2007 from multiple vendors. There was wide variation in the proposals received, including phased-in capacity, with a range of 2 to 40 MW in 2009, and increasing to a maximum of approximately 200 MW by 2013. The number of anticipated customers participating in the programs varied widely, from 100 to more than 10,000. Proposed contract durations ranged from five to fifteen years. The proposals included maximum callable hour limits between 40 and 100 hours during peak load times. The Company's emphasis – consistent with Decision No. 69663 – was to develop a cost-effective program that is most beneficial to both customers and the APS electric system. APS compared all proposals against its avoided cost for conventional generation, and short-listed only those companies who would provide a net benefit against that cost level. Following this short-listing, the Company rigorously negotiated with these parties for clear measurement, verification and performance requirements, including customer service metrics.

After reviewing all proposals received and undertaking detailed contract negotiations with multiple counterparties, APS executed a contract with Alternative Energy Resources, Inc. ("AER"), subject to Commission approval of this program. AER is a subsidiary of Comverge, Inc., a clean energy company that provides peaking and base load capacity to electric utilities, grid operators, and associated electricity markets.

The contract signed with AER is for 100 MW of load reduction capability. The megawatts available under the AER contract increases from 30 MW in June 2010 to 100 MW by 2012. AER will reduce peak demand in targeted geographic locations (Phoenix and Yuma) during the summer months (June – September) through the use of energy management expertise, technology and a communications network.

The DR program will provide firm load reduction capability inside the Phoenix and Yuma metropolitan areas, both of which can be transmission-constrained during some summer hours. The program will mimic a combustion turbine in availability and run time; however, this program will serve to reduce net emissions on the APS system as there are no emissions associated with load reduction services. AER will also provide verified, measurable load reductions with energy shortfall damages. This allows APS to view this contract as "firm" capacity for system reliability purposes, similar to other conventional generating plants. APS believes that the contract negotiated is in the best interests of both APS and its customers.

Because of the competitive nature of the contract, APS will provide the contract and all relevant internal analysis to Commission Staff pursuant to a confidentiality agreement.

C&I Load Management Program Description

The proposed C&I Load Management Program will offer eligible C&I customers[3] incentive payments to reduce usage during the summer system peak, through a combination of direct load control and prescribed manual reduction procedures at the customer site. Load reductions are often for heating, ventilation and air conditioning ("HVAC") systems, lighting, refrigeration, and industrial processes. Direct load control will be actuated by installing control equipment at a customer site that will allow remote control of the customer's equipment, such as adjusting building temperatures and lighting systems. Manual customer reductions are actuated by the customer after notification, and

[3] Customers that will be eligible to participate are small, medium, large or extra large general service, water pumping, non-residential facilities located in the APS metro Phoenix or Yuma service territory that receive standard offer, firm service under one of the following APS rate schedules: E-32, E-32TOU, E-34, E-221, E-221-8T or E-20. Eligible customers cannot be concurrently enrolled in other APS DR rate programs, critical peak pricing rates, or on a partial requirements rate schedule.

may incorporate load switches or control systems to automate the process. APS anticipates upwards of 10,000 customers to eventually participate in this program, although the final customer mix will depend upon AER's roll-out strategy.

The C&I Load Management Program will be in effect during the peak demand months of June through September ("Control Season") beginning in 2010. The DR resource is available during the peak demand hours of 12 o'clock noon until 8:00 p.m. during those months. APS system operators will be able to dispatch the C&I Load Management Program during the Control Season with either a ten minute or a two hour notice to reduce energy demand.

Under the C&I Load Management Program, the facilities of those eligible APS customers that are interested in participating in the C&I Load Management Program would be evaluated to determine total DR potential, and a specific proposal detailing the DR equipment and energy demand targets would be developed. As a participant, a customer would agree that upon receiving notice to provide DR, the customer would reduce its energy usage during each hour of a DR event during the Control Season. The customer would be required to maintain appropriate means of communication, such as the internet, e-mail, phone or pager, to receive notice of a load reduction event. Interval data metering will be utilized to verify that the customer has taken appropriate actions to reduce load during the hours of a program event.

Incentive payments to customers would be managed by AER and would vary, based on the participation levels of the customers. It is anticipated that smaller commercial customers (with a non-coincident peak less than 200 kW) would participate in direct-load control mainly through air conditioning cycling. For larger commercial customers, specific agreements would be reached based on their unique circumstances and equipment. A flexible incentive structure would be designed in order to maximize the effectiveness of recruitment efforts. The amount of the incentive to the customer for participating in the DR program would be part of the agreement between AER and the customer. However, generally, customer incentive payments will be a portion of the capacity payment and, potentially, the variable energy payment made by APS to AER. Because customer participation is required to assure firm load capacity, if a customer does not reduce load as agreed, the customer may be removed from participation in the C&I Load Management Program. To assure that APS customers are satisfied with the C&I Load Management Program, customer satisfaction surveys will be conducted after each Control Season.

Because the C&I Load Management Program is a new offering to APS's customers, an extensive customer outreach and education strategy is necessary in order to engage enough C&I customers to provide load reduction benefits. During the initial preparation period, a customer education and marketing program will be undertaken to recruit APS customers. AER will be responsible for meeting with customers to solicit their participation in the program. Contact with large APS customers will be coordinated through APS Key Account Management personnel. In addition, training materials and scripts will be developed for customer service; program design, management and notification strategies will be formalized; business information systems set up and data interchange protocols will commence; and methods for measurement and verification of the program will be affected. Implementation of the C&I Load Management Program will involve marketing, information technology, account management, metering, and grid operations to assure that appropriate interfaces occur. The Company estimates that it will take approximately a year to prepare and integrate this new resource. To ensure that the program is operational by summer season 2010, APS is requesting that the Commission approve the program no later than April 15, 2009.

The following table reflects the anticipated C&I Load Management Program implementation schedule.

Direct Load Control Program Implementation Schedule

	2008	2009				2010				2011				2012-2024			
Program Activities	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Submit program & ACC review for approval	■	■															
New program approval (estimated)			■														
Program Marketing and Communications			■	■	■	■											
Equipment installation and initialization				■	■	■	■	■	■	■	■	■	■				
Ramp up to full Contract Capacity				■	■	■	■	■	■	■	■	■	■				
Program maintained at ContractCapacity														■	■	■	■

Program Costs and Cost Recovery

Because the Company's initial DR program is based on a contract with AER, which is guaranteeing a specific number of megawatts during specified times, the program costs for the proposed C&I Load Management Program are largely based on capacity and energy payments for the DR resource. In addition, during 2008 and 2009 APS will make expenditures for program development and integration with the Company's Information Systems. APS plans to hire an employee by the end of 2008 to implement and manage the C&I Load Management Program. As the C&I Load Management Program will ramp up during the initial years (2010 – 2012), the capacity payments and expected energy payments will vary. Energy payments are only made when there is a DR event; therefore, forecasted energy payments are based on a projection of potential callable hours in each year of the contract.[4] The actual energy payments that would be recovered may differ based on the number of DR events each year. Starting in 2012, when the C&I Load Management Program is at full deployment, the expenditure levels can be expected to remain relatively flat for the remaining term of the contract.

The following table depicts the C&I Load Management Program budget, including all internal program administration and start-up costs, for the years 2008 – 2013:

[4] As was explained in the DR Study filed on June 28, 2008, programs such as the one proposed herein do not result in a total reduction in kWh on the APS system equal to the amount called for during a DR event. It is expected that as much as 70% of the energy reduced during events will actually be shifted to either before or after the event window. This is one of the main differentiators between DR and other energy efficiency programs.

C&I Load Management Program Budget Details - 2009 through 2013 (Redacted)

Cost Item	2009	2010	2011	2012	2013
Program Development/Implementation Costs [1]	[redacted]				
Capacity Payments	[redacted]				
Energy Payments [2]	[redacted]				
Annual Total	$503,000	$2,764,466	$5,567,321	$8,550,159	$8,555,076

[1] Includes Consultant fees spent in 2007 and 2008 in developing a comprehensive DR approach for APS, the hiring of an employee in late 2008 (costs include benefits), and all IS integration costs
[2] Estimate based on forecasted calls - could differ depending on needs during each event season

Based on APS's projections of costs and the relative benefits of this program, the Company has calculated the following Benefit/Cost Ratios:

Benefit/Cost Test Scenarios (Program Life)

	Societal Cost Test	Program Administrator Test
Present Value of Program Benefits	$72,185,738	$72,185,738
Present Value of Program Costs	$31,894,285	$52,987,003
Benefit/Cost Ratio	2.26	1.36 [5]

Pursuant to Decision No. 69663, APS considered the impacts of this DR program using the Societal Cost Test, which measures the value of a potential program as a resource option based on its total costs and benefits, both to the utility as well as the participant. The effects of the program are quantified for both participants and non-participants, under the assumption that all customers receive a benefit from the participation of a subset of customers. The Societal Cost Test also includes an analysis of emissions impacts. There are no emissions associated with DR contracts such as this, and because they replace physical generation that would otherwise have been utilized, there will be a net reduction in emissions whenever a DR event is called.

In addition to the Societal Cost Test, APS also calculated a Benefit/Cost Ratio using the Program Administrator Test. This test reviews the benefits and costs of a potential program from the perspective of the administrator (*i.e.*, the utility), and is similar in nature to a typical utility avoided cost analysis performed on generation resources. In both Benefit/Cost analyses, the ratios are greater than 1.0; therefore, the proposed program is clearly a net benefit to both APS and its customers.

Pursuant to Decision No. 67744,[6] the DSMAC is the appropriate mechanism to recover program costs for the C&I Load Management Program, including contract costs and

[5] The difference in the Present Value of Program Costs listed above represents the pass-through of a portion of the capacity and energy payments by APS to AER in the form of incentive payments to participating customers. These payments are utilized to compensate customers for anticipated business disruptions and/or discomfort levels due to the DR program. In other words, if APS were to monetize these business disruptions and discomfort levels imposed on the program participants, their values would be equal to the incentive payments.
[6] Issued April 7, 2005, Docket No. E-01345A-03-0437.

program implementation, operational and management costs, and performance incentives. If the program is approved, APS will treat these costs in the same manner as all other energy efficiency programs flowed through the DSMAC.

The capacity and energy prices outlined in the contract are competitively confidential. To preserve this confidentiality, APS proposes that the Company only be required to report in the DSMAC annual filing the total requested recovery amount, including all capacity and energy payments, and the associated performance incentive. As support for this figure, APS will provide the calculations and billing data to Commission Staff in support of the recovery request, pursuant to a confidentiality agreement. As this is a summer only program, APS proposes that such information be given to Commission Staff in a DR-specific year-end annual report so that they may review the recovery amounts prior to the DSMAC adjustment filing. The actual amount requested in each annual filing will vary depending upon the number of DR events APS calls each season and the final negotiated participation incentives that AER agrees to with each participating customer. However, APS anticipates that it will expend between $7 million and $9 million per year for the 15 years the contract is in existence, and will request specific recovery of the actual amount as indicated in the annual reports discussed above.

Conclusion

Based on the nature of the APS system and its customer base, the Company believes that its proposed C&I Load Management Program is a cost-effective DR program and meets the requirements of Decision No. 67744. With this filing, the Company is requesting that the Commission approve the program and acknowledge that the appropriate cost-recovery mechanism for this program is the DSMAC. APS respectfully requests Commission approval no later than April 15, 2009.