ORIGINAL

OPEN MEETING

MEMORANDUM

TO: THE COMMISSION

FROM: Utilities Division

DATE: January 6, 2010

RE: ARIZONA PUBLIC SERVICE COMPANY – APPLICATION FOR APPROVAL OF 2010 ENERGY EFFICIENCY IMPLEMENTATION PLAN (DOCKET NO. E-01345A-08-0172)

On July 15, 2009, Arizona Public Service Company ("APS" or "the Company") filed an application in compliance with the provisions of the Proposed Settlement Agreement (the "Settlement Agreement") filed on June 12, 2009, in the APS Rate Application Docket (Docket No. E-01345A-08-0172). The APS 2010 Energy Efficiency Implementation Plan ("the Plan") sets out the programs and measures by which APS plans to meet the energy savings goals agreed upon in the Settlement Agreement.

On December 2, 2009, Staff filed a memorandum and proposed order with respect to the following four Implementation Plan elements:

Residential

- Low income Weatherization (existing program; multiple enhancements)
- Appliance Recycling (new program)

Non-Residential

- Schools program (existing program; increase in customer cap)
- Self Direction (new portfolio component)

In Decision No. 71444 (December 23, 2009), the Commission voted to approve the four program elements, as modified and amended.

Settlement Agreement Requirements

The Demand-Side Management ("DSM") provisions of the Settlement Agreement required that the Plan include the following general elements: new or expanded programs and program elements necessary for achieving the 2010 energy efficiency goals; the estimated energy savings by program; and a range of estimated program costs by program necessary to meet the goals.

The Settlement Agreement includes the following specific elements:

i. A customer repayment/financing program element for schools, municipalities and small businesses fully integrated in the non-residential programs;

ii. A goal to install DSM measures through existing or enhanced program measures for at least 100 schools by December 31, 2010;

iii. A review of the APS low-income weatherization program for possible enhancement;

iv. A Residential Existing Homes Program with the new Home Performance element and the existing HVAC element, with a goal of serving 1,000 existing homes by December 31, 2010;

v. A non-residential high performance new construction program element with a second tier of performance and a higher financial incentive; and

vi. A residential high performance new home program element with a second tier of performance and a higher financial incentive, which APS was to file with the Commission on or before June 30, 2009.

The Company's proposals to increase the school district cap (relates to Item (ii)) and to enhance the Low Income Weatherization program (Item iii) were addressed in the December 2, 2009, filing, and in Decision No. 71444.

Scope of Review

Summarized descriptions will be provided for existing programs, but the focus of Staff's review and analysis will be new programs, new portfolio components and program enhancements. Measures previously determined by Staff to be cost-effective will not be re-evaluated for cost-effectiveness at this time, unless new information indicates that re-evaluation is necessary.

The remaining plan elements will be addressed herein, with the exception of the Residential New Construction (Energy Star Plus) Program, which will be reviewed separately. The Implementation Plan elements being reviewed are listed below:

Residential

- Consumer Products (existing program; three new measures)
- Residential Existing Homes (existing program; adds Home Performance enhancement)

Non-Residential

- Non-Residential New Construction (existing program; adds second performance tier)
- Non-Residential Customer Repayment Financing Program (new portfolio component)
- Non-Residential Existing Facilities program (no new measures or significant changes; impacted by other changes to the portfolio)

Overall Portfolio

- Demand-Side Management Adjustor charge (recovery for program costs)
- Performance Incentive
- Budget increases for existing programs.

RESIDENTIAL PROGRAMS

Consumer Products

Existing Program Description. APS proposes to add three measures to the existing Consumer Products program. The current program provides discounted Compact Fluorescent Lamps ("CFLs") to residential APS customers. APS negotiates agreements with lighting manufacturers and retailers, who pass the discounted prices on to consumers. Customers are then referred to participating retailers. Consumer education and sales training for retailers are also provided under the program.

Proposed Program Enhancements. APS is proposing to add three new measures: (i) variable-speed pool pumps with energy-efficient motors; (ii) dual-speed pool pumps with energy-efficient motors; and (iii) smart digital pool pump timers. The enhanced program would provide incentives to consumers, retailers and installers to help cover the incremental cost of these three measures, and the costs associated with correct calibration and added paperwork. It would also provide training to distributors and installers on the correct installation of the more efficient pool pumps.

Budget Allocations. APS proposes to increase the budget by $1,114,000 (to $6,752,000) to cover incentives and program delivery costs for the new measures. The allocations for the new measures are listed below, by measure and category of expenditure. (For information on the budget for the entire program, inclusive of CFLs, please see the table in the section entitled, Budget Allocation, Current and Proposed.)

2010	Variable-speed Pump Motors	Two-Speed Pump Motors	Smart Timers	Total Per Category
Incentives	$486,000	$22,000	$113,000	$621,000
Program Delivery (non-incentive costs)[1]	$369,000	$25,000	$99,000	$493,000
Total Budget	$855,000	$47,000	$212,000	$1,114,000

APS has allocated a much smaller budget for the two-speed model. In response to Staff's data request, APS stated that the allocations for the pool pump measures were based on sales data from existing rebate programs in California and Nevada, where sales of two-speed models were significantly lower than those for variable-speed pool pumps. The Company also focused on variable-speed pool pumps due to their higher savings, and because the pool pump market is trending toward the variable-speed models. (Additional information regarding the specific measures is discussed further herein.)

The budget allocations proposed for the entire Consumer Products program, including costs for the existing program and measures, are listed in the table below:

Year	2010
Rebates and Incentives	$4,212,000
Training and Technical Assistance	$12,000
Consumer Education	$30,000
Program Implementation	$1,968,000
Program Marketing	$331,000
Planning and Administration	$199,000
Total Budget	$6,752,000

Duel Speed and Variable-speed Pool Pumps. Pool pumps are used to circulate pool water through a filter, to keep the water clean and prevent the growth of algae. Inefficient pumps can be among the largest users of a home's power, but efficient pumps and timers can significantly reduce that usage. Dual-speed pool pumps with timers can save over 1,000 kWh annually[2], while variable-speed pool pumps can save approximately 2,000 kWh annually. More

[1] The lower projected participation for the two-speed measures means that the fixed costs would be spread over relatively few installations, making program delivery costs higher per installation. In addition, since this would be the year the pool measures were introduced, the costs of ramping up the additional measures (such as training and programming) would add to higher delivery costs for all three measures.

[2] Cost-effective energy savings are unlikely to be achieved with a two-speed pump, unless there is also a timer. For this reason, the two-speed measure includes a timer (not assumed to be seasonal/smart timers) with the pool pump. Variable-speed pool pumps usually have a built-in timer (although not a smart timer).

efficient pool pumps can also last longer, offer improved pool cleanliness and run more quietly. The incremental cost for both types of pumps, however, is significantly higher than for standard models. APS estimates an incremental cost for the two-speed pool pump (with timer) of $229, while the incremental cost of the variable-speed pool pump is estimated at $650. The proposed incentives would cover part of these incremental costs. (See the section on Incentives, below.)

Smart Digital Pool Pump Timer. A pool pump timer controls the functioning of a pump, to optimize efficiency and limit breakdowns due to overuse of the pump. The smart digital pool pump timer is used with existing pool pumps, to replace mechanical timers. These smart timers produce savings by automatically reducing pool pump run times during cooler months, when pools are less frequently used.

Incentives. APS is proposing a total $270 incentive for variable-speed pool pumps, a total rebate of $110 for the two-speed model, and a $75 rebate for pool pump timers. The proposed incentives are listed below:

Measure	Distributor/Retailer Incentive (Passed on to customer)	Contractor/Installer Incentive (for proper calibration of pool pump motor)	Document Filing Incentive (to Distributor/Retailer)	Total Incentive Per Measure
Variable-speed pool pump motor and timer	$200	$50	$20	$270
Two-speed pool pump motor and timer	$100	$0	$10	$110
Measure	Consumer Instant Rebates	Contractor Incentive	Document Filing Incentive	Total Incentive Per Measure
Pool pump motor digital smart timer	$75	$0	$0	$75

Under the program, pool pump incentives would be provided to customers through retailers/distributors and contractors/installers. (In some cases, the same company will both sell and install the pool pumps.) The Company indicates that this method of delivery is more convenient for customers. Working through the retailers/distributors and contractors/installers also makes it easier for APS to ensure that the variable pool pump motors are properly calibrated[3], which enhances the energy savings available from this measure. APS requires that

[3] Calibration is provided under the program to optimize the run times and savings.

participating retailers/distributors and contractors/installers submit documentation in order to demonstrate that the discounts have been passed on to customers.

For smart timers, APS is proposing an instant rebate for consumers, to encourage participation. The Company is currently planning to provide a discount to the customer at the time of purchase, through participating retailers and installers. A retailer or installer would then request reimbursement from APS, submitting a rebate form, invoice and a copy of the customer's bill. Alternatively, APS is considering a mid-stream buy down from the manufacturer, similar to that done for the CFL measure. Staff recommends that the Company report whether it has chosen the instant rebate or buydown in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission.

Incentives; Other States. Practices in other states vary. Some utilities offer lower pool pump rebates for the two-speed pool pump, as compared to the variable pool pump, or offer rebates only for the variable-speed pool pump. In Nevada, NV Energy, for example, offers a $50 rebate for efficient two-speed pumps, and a $100 rebate for efficient variable-speed pumps, while Austin Energy offers a $200 rebate only for qualified variable-speed pumps and motors. Pacific, Gas and Electric in California ("PG&E") notes on its website that Title 20 of the California appliance standards now requires two-speed pool pumps as a minimum and that, as a result, it will no longer offer a rebate for two-speed models after January 1, 2010. Rebates of $100 for variable-speed pool pumps will, however, continue to be offered. Several other California utilities have equal incentives for variable and two-speed pool pumps, including Southern California Edison ($200), San Diego Gas and Electric ($100) and Pasadena Water and Power (for two-speed, four-speed and variable; $200 purchased outside Pasadena; $250 purchased within Pasadena).[4]

Staff Analysis and Recommendations on Proposed Program Enhancements

Cost-Effectiveness. Staff estimates the benefit-cost ratio of the two-speed pool pump at 1.57 and the variable-speed pool pump at 1.22. The significantly higher incremental cost of the variable-speed pool pump negatively impacts its cost-effectiveness, as compared to the two-speed. Staff notes, however, that the incremental cost of newer and more energy-efficient equipment usually decreases over time and with wider adoption.

Staff Recommendation: Two-Speed and Variable Pool Pumps. More efficient pool pumps are not only producing energy savings as a cost-effective measure, but may also offer program participants improved performance with respect to lifespan, noise levels and cleaning capability. Staff recommends that two-speed and variable pool pumps be approved as new measures for the Consumer Products program.

[4] Staff reviewed information on the relevant websites, but found no indication regarding whether the rebate structure would be changed, as with PG&E, in response to the new California appliance standards.

Staff Recommendation: Pool Pump Timers. Staff estimates the benefit-cost ratio for the pool pump timer measure at 2.01, but this is dependent on the energy savings being similar to what has been predicted. Pool pump timers, like programmable thermostats, can not be cost-effective unless they are set and used in a way that provides sufficient energy savings. While pool pumps are less tied to immediate comfort than programmable thermostats, with less impetus for customers to override or re-set a pool pump timer, Staff is concerned that savings could be lower than expected. (This is particularly true in light of the limited information available on pool pump programs elsewhere.)

Staff recommends that APS complete its review of the savings data once there is 12 months of data, and that the Company file a letter on the results of its review no later than April 1, 2011. The letter should address the participation levels for this measure and should state whether or not the timer measure results in cost-effective energy savings. Staff also recommends that timers cease to be included as a measure eligible for rebates unless savings from the timers can be verified by the Company.

Reporting Requirements. Staff recommends that APS continue to report on the Consumer Products program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission. Staff also recommends that the reporting include information and data on the new, or enhanced, program components approved by the Commission. The information and data reported should include the number of customers participating, the level of spending for energy efficiency measures, the level of spending associated with non-energy-efficiency measures, the number of measures installed, by type of measure, and the estimated energy and environmental savings arising from this portfolio component, along with any other information necessary for the Commission to understand the progress and status of the program.

Staff recommends that the Consumer Products Program be approved, with the program enhancements, as modified by Staff recommendations.

Residential Existing Homes

Existing Program Description. Residential Existing Homes HVAC is an ongoing program that promotes the replacement of split and package whole-house air conditioners and heat pumps in existing homes with energy-efficient equipment. The program also promotes the quality installation of energy-efficient replacement equipment and the repair and replacement of leaking duct systems.

Proposed Program Enhancements. The Settlement Agreement, Section 14.11, adds a Home Performance element to the program and sets a goal for the number of homes to be served by the end of 2010:

> "APS will have a Residential Existing Homes Program, which will include both a new Home Performance element and the existing HVAC element. The goal of the Home Performance element will be to serve at least 1,000 existing homes by December 31, 2010."

The Settlement Agreement also outlines the features of the new component, which begins by identifying opportunities to improve a home's energy efficiency using an on-site home energy audit, or assessment.

> "These customers will be served by conducting an on-site energy assessment, direct installation of some energy saving measures (e.g. lighting, air sealing), and delivering information and incentive offers on a comprehensive set of recommended measures for consideration by the customer."

Measures that must be included in the enhanced APS program are specified in the Settlement Agreement, and are required to accord with the Energy Star program.

> "The customized list of recommended measures shall include items such as insulation, duct repair and HVAC improvements to save energy, consistent with the national EPA/DOE Home Performance with ENERGY STAR program;" (Section 14.11, paragraph d.)

Attachment 2 of the Implementation Plan provides details on how the Company proposes to enhance the Residential Existing Homes program in accordance with the provisions of the Settlement Agreement. In summary, it describes the Home Performance with Energy Star ("HPwES") component as designed to: (i) help residential customers identify energy efficiency opportunities through energy audits; and (ii) provide customers with incentives to make the energy-related improvements identified in the audit.

Proposed Budget; Enhancements. The proposed budget for the Home Performance element is show in the table below:

2010	Air Sealing	Attic Insulating and Sealing	Duct Repair (HPwES)[5]	Shade Screens	Direct Install: Shower-head	Direct Install: Aerators	Direct Install: CFLs	Home Audit	Total
Incentives	$125,000	$125,000	$100,000	$50,000	$31,200	$11,400	$16,000	$200,000	$658,600
Program Delivery[6]	$248,000	$197,000	$128,000	$97,000	$22,500	$7,500	$0	$0	$700,000
Total	$373,000	$322,000	$228,000	$147,000	$53,700	$18,900	$16,000	$200,000	$1,358,600

Proposed Budget; Entire Program. The proposed budget for the revised program, as a whole, is shown in the table below:

Year	2010
Rebates and Incentives	$3,519,000
Training and Technical Assistance	$88,000
Consumer Education	$279,000
Program Implementation	$1,200,000
Program Marketing	$598,000
Planning and Administration	$223,000
Total Budget	$5,907,000

Cost-Effectiveness. Staff reviewed the cost-effectiveness of the enhanced measures associated with the proposed new Home Performance component (with the exception of the Duct Test and Repair measure, which is part of the existing program, and has been previously reviewed for cost-effectiveness). Staff's review indicated that all of the proposed Home Performance measures were cost-effective, based on kWh savings alone (in some cases, there were also natural gas savings arising from the same measures.) The benefit-cost ratios estimated by Staff for the six new program measures are reported in the table below:

[5] Home Performance with Energy Star.

[6] Air Sealing, Attic Insulation and Sealing, Duct Repair and Shade Screens have comparatively high installation costs for customers, so fewer customers will install these measures, making the fixed costs per installation higher. In addition, since this would be the first year for the Home Performance component, the costs associated with ramping up the component (such as training and programming) would add to higher program delivery costs. As the program matures and participation increases the program delivery costs per unit should decrease.

New Measure	Air Sealing	Attic Insulation and Repair	Window Shade Screens	Showerheads	Aerators	CFLs
Staff's Estimated Benefit-Cost Ratio	1.14	1.03	1.05	1.28	3.23	7.16

Reporting. Staff recommends that APS continue to report on the Residential Existing Homes program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission, and that the reporting include information and data on the new, or enhanced, program components approved by the Commission. Progress in meeting the goal set in the Settlement Agreement should be monitored and reported, as should information about any barriers to meeting this goal. The information and data reported should also include the level of spending for energy efficiency measures, the level of spending associated with non-energy-efficiency measures, the number of measures installed by type of measure, and the estimated energy and environmental savings arising from this portfolio component, along with any other information necessary for the Commission to understand the progress and status of the program. In addition to any issues concerning the participation goal from the Settlement Agreement, any other ongoing problems and their proposed solutions should also be reported.

Staff Recommendation. The Home Performance measures proposed by the Company are cost-effective and likely to improve the energy efficiency of existing Residential homes, while also lowering customer bills. Staff recommends that the new Home Performance component proposed for the Residential Existing Homes program be approved.

NON-RESIDENTIAL PROGRAMS

Non-Residential New Construction

Existing Program Description. The existing Non-Residential New Construction program currently consists of six major components:

i. Study Incentives and Design Assistance. This element promotes the use of studies to identify individual measures or whole-building approaches that result in improvement at least 10% more efficient than the current building standard;

ii. (ii) Measure Incentives. This component provides incentives for building owners and developers to invest in energy efficiency;

iii. (iii) Trade Allies. The program promotes energy efficiency through a network of energy engineers, architects, contractors and consultants;

iv. (iv) Outreach and Training. The program also provides energy efficiency training classes to customers, developers and trade allies;

v. (v) Technical Support. Provides direct contact and services to facilitate the adoption of energy efficient technologies and design practices.; and

vi. (vi) Tracking, Quality Assurance and Administration. This component provides for the required tracking of program activities and results.

Proposed Program Enhancement. The Settlement Agreement provides for "[a] non-residential high performance new construction program element with a second tier of performance and a higher financial incentive." The Implementation Plan proposes to satisfy this requirement by adding a Whole Building Design component to the existing program, for savings achieved "by integrating the design of the building envelope, HVAC systems and lighting systems"[7], using the ASHRAE 90.1 2007 building standard as a baseline. The Whole Building Design component would provide incentives to both owners and developers and building design teams, with progressively higher incentives for progressively higher savings.

Eligibility. Non-Residential customers of all sizes are eligible for the Non-Residential New Construction program, however, the primary market is likely to be customers with billed demand of more than 100kW. Non-Residential customers of this size include large, office, retail outlets and groceries, resorts and large hotels, colleges and universities and inpatient healthcare facilities. The Non-Residential New Construction program is open to both new construction and major renovation projects. The proposed Whole Building Design component, if approved, would also be open to customers with either new construction or major renovations projects.

Incentives; Building Design Teams. The proposed building design team incentives are new, and APS has indicated that these are crucial to achieving significant savings from the Whole Building Design component. The incentives are designed to overcome cost- or time-investment barriers to creating energy-efficiency focused designs. Building design team incentives have been used in programs in multiple other states, including Massachusetts, New York, Oregon and California.

Incentives; Ranges and Caps. Under the Whole Building Design component, incentives for owners/developers would range from $0.10 to $0.26 per kWh saved during the first year of operation. The incentives would be tied to savings ranging from 10% to 30% above the ASHRAE 90.1 – 2007 baseline. Incentives for building teams would range from $0.04 to $0.12 per kWh saved during the first year of operation, also for savings ranging from 10% to 30% above the ASHRAE 90.1 – 2007 baseline. The measure cap for the new component would be

[7] Implementation Plan, Attachment 5, page 3.

75% of the incremental cost, up to $300,000 per customer, per year, for owners/developers. In communication with Staff, APS has also proposed a separate cap of $125,000 per building design team, per year, as being reasonable and scaled to the customer cap. Incentives would be provided only after APS has received final design plans and documents, and these would undergo review to determine their adherence to the required energy efficiency measures.

Budget. The proposed budget for the enhanced Non-Residential New Construction program is set forth in the table below.

Year	2010
Rebates and Incentives	$3,547,000
Training and Technical Assistance	$75,000
Consumer Education	$25,000
Program Implementation	$1,053,000
Program Marketing	$564,000[8]
Planning and Administration	$173,000
Total Budget	$5,437,000

Cost-Effectiveness. APS informed Staff that the cost-effectiveness of the new Whole Building component was based not only on the combined energy savings provided by the measures individually, but on simulations that also include energy savings arising from the interaction of the measures. (One example is more efficient lighting that generates less heat, thereby reducing the air conditioning load.) Staff's review indicated that the proposed Whole Building Design component is cost-effective, and Staff estimated the benefit-cost ratio at 1.48.

Reporting. Staff recommends that APS continue to report on the Non-Residential New Construction program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission, and that the reporting include information and data on the new, or enhanced, program components approved by the Commission. The information and data reported should include the number of customers participating, the level of spending for energy efficiency measures, the level of spending associated with non-energy-efficiency measures, the number of measures installed by type of measure, and the estimated energy and environmental savings arising from this portfolio component, along with any other information necessary for the Commission to understand the progress and status of the program. Any ongoing problems and their proposed solutions should also be reported.

Staff Recommendation. Staff recommends that the Whole Building Design component, proposed as an addition to the Non-Residential New Construction Program, be approved. Staff also recommends that the building design team incentive be approved, with the proposed per building design team annual cap of $125,000.

[8] For the entire program, including promotion of the new Whole Building Design component.

Non-Residential Customer Repayment Financing Option

Description. Non-residential Customer Repayment Financing option is a new portfolio component. The Settlement Agreement provided that the Implementation Plan would include the following:

> "A customer repayment/financing program element for schools, municipalities and small businesses fully integrated in the non-residential programs. This customer repayment element must be fully integrated from the perspective of the customer and not a separate offering. APS may use an actual on-the-bill or a parallel bill approach to implement this provision. Financing costs (including any default or guarantee cost) will be fully recoverable as a program cost. Any financing provided directly by APS will be at its weighted average cost of capital (if APS buys down the financing rate for the end-using customer, the differential between APS' cost of capital and such reduced rate will also be recovered as a program cost);"

The Implementation Plan states that the proposed customer repayment financing program element for schools, municipalities and small businesses would be fully integrated into the following three non-residential programs: (i) Large Existing Facilities; (ii) Small Business and (iii) Schools. APS plans to offer direct monthly billing using a bill parallel to customers' monthly electric bills, and states that the program "will be offered to give qualified customers a choice on how to fund their APS Solutions for Business energy efficiency projects." APS Solutions for Business rebates will be used to reduce the customer's monthly loan payment.

Third Party Financing Partner. APS anticipates that it will be successful in reaching an agreement with a provider for third party financing. In October 2009, providers were asked to present their programs to APS, and in November 2009, the Company entered into discussions with the preferred third party financing partner. APS is now working through details of the Repayment Financing Program.

Eligibility to Participate in the Repayment Financing Program. In response to a data request from Staff, APS indicated that it was considering the following minimum requirements for customers to apply to the program:

(i) Applicants would have to be eligible to participate in the APS Business Solutions program. The Solutions for Business Program already ensures that participants are APS customers and that they qualify for the Solutions for Business program;

(ii) Applicants would have to be in business and under the same management for at least two years;

(iii) Applicant owners must not have filed for bankruptcy;

(iv) Applicants must have been APS customers for a minimum of one year and must be current on their bills; and

(v) Applicants must meet the financing provider's minimum underwriting standards.

Establishing Creditworthiness of Program Applicants. The financing provider would determine the creditworthiness of applicants, with input from APS. The Company's goal is to strike a balance between allowing as much participation as possible, while still limiting the size and number of defaults in order to keep down program costs. The requirements for establishing creditworthiness currently under consideration include the following:

Small Businesses

(i) Filling out a loan application;
(ii) Providing two years of business tax returns;
(iii) Providing current interim balance sheets and income statements;
(iv) Providing two years of personal tax returns; and
(v) Providing a personal financial statement.

Schools and Municipalities

(i) Filling out a loan application;
(ii) Providing two years of business tax returns; and
(iii) Providing a current interim balance sheet and income statement.

Defaults. Program loans would be unsecured. None of the loans would be guaranteed. Any default costs would be charged to the program and would be fully recoverable, as stated in the Settlement Agreement. The financing provider will track all loans, including loans in default, and report to APS at least once a month.

Collection. The financing provider would use normal and customary collection efforts on loans which are past due. Loans would be considered past due once they are 11 days overdue. At this time, the financing provider would begin collection efforts, including letters and telephone calls. At 90 days past due, the financing provider would turn the loan over to an internal collections group, which would pursue legal remedies based on the recovery potential of the loan. Also at 90 days past due, the financing provider would charge APS for the total outstanding amount of the loan, and any other related costs. Any subsequent amounts collected on the loan would be reimbursed to APS.

American Recovery and Reinvestment Act of 2009 Act ("ARRA"). In the Implementation Plan the Company stated that it would advise its customers on the availability of ARRA revolving loan funds that could be used as a financing alternative. At that time, the Arizona State Department of Commerce Energy Office was planning to offer a $2 million revolving energy loan fund, utilizing ARRA monies. Since then, plans for a revolving energy loan fund have been dropped in favor of establishing a grant fund for renewable and energy efficiency businesses that want to retool or expand.[9] APS is not aware of any other revolving loans funds arising from ARRA monies.

Budget for the Non-Residential Customer Refinancing Repayment Element. The revolving loan fund and its associated budget are set out in the table below, to illustrate the funding level and costs associated with Customer Refinancing Repayment Element. (Additional descriptions of these elements are supplied in the following paragraphs.) Please note that while the costs associated with implementing and maintaining the Non-Residential Customer Refinancing Repayment option are set out separately, herein, the administrative and default costs are actually part of the proposed budgets for the Large Existing Facilities, Small Business and Schools programs. In keeping with the language of the Settlement Agreement[10], there is no separate budget for the repayment option.

Loan Fund	Estimated Amount
Revolving Loan Fund	$10,000,000
Administrative and Default Costs per Program	Estimated Amounts
Large Existing Facilities	$100,000
Small Business	$100,000
Schools	$100,000
Administrative and Default Costs Total	$300,000

Revolving Loan Fund. APS initially estimated $10 million as the amount for the revolving loan fund. If the Company is able to bring in a third party financing provider, loans would not necessarily be capped at $10 million. Instead, the amount loaned under the repayment option would depend on marketplace demand.

Costs. In addition to the revolving loan fund, the Company has estimated $300,000 in costs associated with the repayment option. As stated elsewhere herein, costs are imbedded in the budgets for the three non-residential programs that include repayment financing as an option ($100,000 each for Large Existing Facilities, Small Business and Schools). The $300,000 in costs cover the following: (i) first year default costs; (ii) IT for developing on-bill/parallel billing; (iii) developing and maintaining the program; (iv) training for contractors to help promote the program; and (v) collateral materials promoting the financing option.

[9] Based on information from APS and from the Commerce Energy Office.
[10] "This customer repayment element must be fully integrated from the perspective of the customer and not a separate offering."(14.11, d.).

Staff Analysis and Recommendations.

Reporting. Staff recommends that APS report on the Non-Residential Customer Repayment Financing program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission. The information and data reported should include the number and size of the loans, the number of borrowers in each classification (schools, small businesses or municipalities), the number and size of the loans in default, the total amount found to be uncollectible, and any other information necessary for the Commission to understand the progress and status of the program. Any ongoing problems and their proposed solutions should also be reported.

Additional Reporting Recommendation. Staff also recommends that any default, or group of defaults, that would significantly affect the functioning of the Non-Residential Repayment Financing Program be reported to the Commission within 30 days of APS being notified, or otherwise becoming aware, of the affecting default or defaults.

Staff recommends approval of the Non-Residential Repayment Financing Program. Staff also recommends that APS work to modify the loan requirements, or otherwise modify this program element, if it becomes necessary to address unanticipated problems.

Non-Residential Existing Facilities

The Company has not proposed to make any significant changes to this program, aside from an increase to its budget. This section is intended as a summary of the program and the changes to the portfolio (as opposed to the program itself) that are likely to affect it. Portfolio changes that impact this program (the Self Direction and Customer Repayment Financing options) are discussed at more length elsewhere in this document, or in Decision No. 71444 .

Description. Non-Residential Existing Facilities is an existing program for which APS has proposed no new measures. The program targets non-residential customers with an aggregated monthly demand greater than 100 kW, and provides incentives for energy efficiency improvements relating to lighting, HVAC, motors, building envelopes, and refrigeration.

Changes. Although no new measures have been proposed, APS has proposed a substantial increase to the budget, from $6,261,000 to $10,910,000 (see the section entitled "Budget Increases for Existing Program.") However, eligible non-residential customers would be able to take part in the Self Direction program (see Decision No. 71444), and/or the Non-residential Customer Repayment Financing option If approved by the Commission, these funding options create a potential for higher levels of participation by non-residential customers. The Company has not proposed any other significant changes to the Existing Facilities program. (The increased budget and the Customers Repayment Financing option are discussed in more detail herein; the Self Direction program is discussed in more detail in Decision No. 71444.)

Reporting. Staff recommends that APS continue to report on this program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the

Commission. In addition, the Company should report on how the financing and Self Direction options have impacted participation.

OVERALL PORTFOLIO

Eligibility for Incentives

Adjusting the Baseline. Staff recommends that no measure be eligible for incentives unless it provides energy savings over and above the current standard. When energy efficiency standards change, due to legislation, market transformation, or through other means, the baseline for program measures should be adjusted accordingly.

Budget Increases for Existing Programs

The budget increases for the APS portfolio of energy efficiency programs arise from the following: (i) enhanced existing measures; (ii) new measures for existing programs; (iii) the new Residential Recycling Program; (iv) the costs associated with the refinancing option; and (v) Measurement, Evaluation and Research. (The performance incentives and the manner in which they should be calculated are discussed separately herein, in the section entitled "Performance Incentives.")

Program	Current (2009) Budget[11]	Proposed Increase from New Measures	Proposed Increase from Existing Measures	Proposed Total (with increases from new and existing measures)
Low Income Weatherization	$1,567,000	-0-	$746,000	$2,313,000
Residential Existing Homes	$2,801,000	$1,358,600	$1,747,400	$5,907,000
Residential New Home Construction	$1,818,000	$400,000	$200,000	$2,418,000
Consumer Products	$4,061,000	$1,114,000	$1,577,000	$6,752,000
Refrigerator Recycling	n/a (new program	$1,428,000	n/a (new program)	$1,428,000
Residential Total	$10,247,000	$4,300,600	$4,270,400	$18,818,000

[11] On December 29, 2009, APS filed a letter in docket E-01345A-07-0712 notifying the Commission that it was shifting funding in accordance with Decision Nos. 68648 and 70637, in order to avoid interruptions to the Residential Existing HVAC and Non-Residential New Construction programs.

Large Existing Facilities	$6,261,000	$100,000	$4,549,000	$10,910,000
New Construction	$1,671,000	-0-	$3,766,000	$5,437,000
Small Business	$2,225,000	$100,000	($121,000)[12]	$2,204,000
Schools	$1,060,000	$100,000	$1,896,000	$3,056,000
EIS	$186,000	-0-	$9,000	$195,000
Non-Residential Total	$11,403,000	$300,000	$10,099,000	$21,802,000
Portfolio Total	$21,650,000	$4,600,600	$14,369,400	$40,620,000
Measurement, Evaluation and Research ("MER")	$1,000,000	n/a	$1,300,000[13]	$2,300,000
Total with MER	$22,650,000	$4,600,600	$15,669,400	$42,920,000

Increased funding is necessary for APS to meet higher energy efficiency standards. Staff recommends that the increased budgets for each program or portfolio element of the APS 2010 Energy Efficiency Plan be approved, so long as the program or portfolio element has itself been approved by the Commission. Any approved changes to a proposed program or program element that would have a significant impact on its budget should be taken into account, when approving the budget for that program or portfolio element. (The recommendation to approve the enhanced budgets does not include the performance incentive, which is dealt with in another section.)

Staff also recommends that the Company be allowed to shift funding from less active to more active programs, for up to 25% of the budget for the less active program. This should be limited to cases where the more active programs have exhausted their budgets, or will do so in the near future. Any budget shifting should be done within, and not between, the Residential and Non-Residential program sectors.

Reporting Requirements. Staff recommends that, in addition to the other reporting requirements discussed herein, any budget shifts should be reported in the semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission.

Performance Incentive

Annual Energy Savings Goals. The Performance Incentives are based on the level of energy savings APS achieves relative to its annual energy savings goals. The APS Energy Efficiency annual energy savings goals are 1.0% in 2010, 1.25% in 2011 and 1.5% in 2012. (Section 14.1 of the Settlement Agreement states that the goals are "a percent of total energy resources needed to meet retail load.") If higher requirements and/or performance incentives are adopted by the Commission for 2010, 2011 or 2012 in another docket, those higher goals or performance incentives would supersede those listed in Section 14.1.

[12] The Small Business budget for 2010 decreased slightly due to a lower-than-expected participation rate arising from the economic downturn and difficulties in reaching this market segment. APS anticipates reaching its projected budget for 2010.

[13] Increase due to the increased effort required to monitor and evaluate additional measures and generally larger energy efficiency portfolio.

In its Implementation Plan, APS sets forth the estimated MWh savings required to meet the annual energy savings goals in 2010, 2011 and 2012, as listed in the Settlement Agreement:

Year	Estimated MWh	Percentage of total energy resources
2010	320,000 MWh	Estimated to be 1.00% of total energy resources in 2010
2011	400,000 MWh	Estimated to be 1.25% of total energy resources in 2011
2012	490,000 MWh	Estimated to be 1.50% of total energy resources in 2012

Basis for Calculating Performance Incentives and Caps. Performance incentives would first be calculated based on the Company's achievement relative to these Energy Efficiency requirements, then capped, or limited, based on the program costs. Section 14.2 of the Settlement Agreement is quoted below:

> "The existing performance incentive for energy efficiency programs shall be modified to be a tiered performance incentive as a % of net benefits, capped at a tiered % of program costs."

Set forth below is the Settlement Agreement table listing the performance incentive for each level of achievement relative to the energy efficiency goals, and the performance incentive caps, which are based on percentages of program costs:

Achievement Relative to the Energy Efficiency Goals	**Performance Incentive as % of Net Benefits**	**Performance Incentive Capped at % of Program Costs**
Less than 85%	0%	0%
85% to 95%	6%	12%
96% to 105%	7%	14%
106% to 115%	8%	16%
116% to 125%	9%	18%
Above 125%	10%	20%

Issue 1 Regarding Basis for Caps. In the Implementation Plan, APS asserts that any performance incentive it receives should be capped based on program costs *which include the performance incentives.* The Implementation Plan states the following:

> "Assuming APS meets 100% of the energy efficiency goal, the maximum performance incentive is 14% of the total energy efficiency program cost. By definition, these program costs include the performance incentive (see Attachment A, paragraph 45 of Decision

> 67744). Therefore, the performance incentive is 16.28% of the energy efficiency program cost before the performance incentive is added in."

Staff does not agree that the cap on performance incentives should be based on program costs that include performance incentives. One reason is that the performance incentive methodology cited by APS (paragraph 45 of Decision No. 67744) bases the cap on *DSM spending* that includes performance incentives, not on *program costs,* with or without the addition of performance incentives. The actual language of Decision No. 67744 states that "Such performance incentive will be capped at 10% of the total amount of *DSM spending*, inclusive of the program incentive[14], provided for in this Agreement. . . ." *[emphasis added]*

Another reason for Staff's disagreement is that the proposed Settlement Agreement bases the cap on program costs alone ("capped at a tiered % of program costs")[15] and, if approved, this methodology for calculating the cap would supersede the methodology described in Decision No. 67744. In addition, the Settlement Agreement clearly indicates that performance incentives should be based on the Company's energy efficiency achievements. Calculating the cap in the manner proposed by APS would mean that the performance incentive would be increased by costs unrelated to creating energy savings, which is plainly not the intent of the Settlement Agreement.

Impact of Including Performance Incentives in Program Costs. In the example used by APS, the Company has met 100% of its energy savings goal of 320,000 MWh, and could receive a performance incentive of up to 7% of the $109,047,000 in Net Benefits ($7,633,290), but this amount is subject to the cap on performance incentives (14% of the program costs). The next step is then to establish the cap, or limit, on the performance incentive, based on program costs.

Calculating the Cap. Based on Staff's analysis of the APS example, the impact of including performance incentives in program costs for purposes of calculating the cap is significant, as illustrated by the comparison below.

- Scenario 1:14% of Program Costs (Not Including Performance Incentive): In Scenario 1 the cap would be calculated based on the program costs, which equal $42,920,000 (this includes Measurement, Evaluation and Research costs, but not the performance incentive). At 14% of $42,920,000, the cap would be $6,008,800.

- Scenario 2;:14% of Program Costs *Plus* Performance Incentive : In Scenario 2, as proposed by the Company, the cap would be calculated based on the program costs *plus* the performance incentive, or the $42,920,000 in program costs *plus* $6,987,000

[14] The reference to a "program incentive" rather than a "performance incentive" is presumed by Staff to be unintentional.

[15] For the definition of program costs see the Electric Energy Efficiency standards: "[T]he expenses incurred by an affected utility as a result of developing, marketing, implementing, administering, and evaluating Commission-approved DSM programs."

in performance incentives.16 In this scenario the cap would now be $6,987,000 (rounded), or 14% of $49,907,000.

Because 7% of Net Benefits ($7,633,290) is a greater amount than the 14% cap (calculated in either way), it is the cap which actually determines the final amount of the performance incentive. In this example, adding the performance incentive into program costs for the purpose of calculating the cap would increase the performance incentive from $6,008,800 to $6,987,000, or by approximately $978,000.[17]

Staff's conclusion is that calculating the cap on performance incentives in the manner proposed by the Company would not only be incorrect, but would create an unfair burden on ratepayers. Under the APS proposal, ratepayers would be responsible for a higher performance incentive than a correct calculation would allow, and that additional cost would not arise from increases in energy efficiency, and would not benefit customers.

Issue 2 Regarding Basis for Caps. Staff also considered the question of whether incentives paid out by the utility should be included in program costs for purposes of calculating the cap on performance incentive. As noted in the Electric Energy Efficiency Standards, the Societal Test starts with the Total Resource Cost ("TRC") Test, which excludes incentives paid by affected utilities. To determine the cost of a measure, Staff typically takes into account the incremental measure costs and the program costs, exclusive of any incentives paid out by the utility. (Staff considers incentives to be a transfer payment, with the cost and the benefit being equal and cancelling one another out.) So, for purposes of calculating the benefit-cost ratio, incentives paid out by the utility would not be considered a program cost. However, since incentive costs are a necessary expense associated with implementing many energy efficiency programs, Staff believes they should not only be recoverable, but should be considered a program cost for purposes of calculating the cap on performance incentives.

Staff Recommendation on Calculating the Performance Incentive. Staff recommends that APS' proposed methodology for calculating the cap on performance incentives not be approved. Staff recommends that, instead, the methodology for calculating the performance incentives be approved in accordance with the Settlement Agreement, meaning that the cap on performance incentives should be based on program costs alone, without the addition of performance incentives. (Incentives paid out to customers as part of program implementation, however, should be considered program costs for purposes of calculating the cap on performance incentives.)

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[16] The circular and uncertain mathematics of calculating a number as a percentage of an amount which includes itself is another problem with this method of calculating the performance incentive.

[17] In summary: 1% of total energy resources=320,000 MWh= 7% of Net Benefits ($109,047,000)=$7,633,290 capped by 14% of program costs ($42,920,000 without performance incentive or $49,907,000 with performance incentive)=$6,008,800 or $6,987,000.

Demand-Side Management Adjustor Charge ("DSMAC")

Recovery Through Base Rates. APS is allowed to recover $10 million of its DSM costs through base rates each year. The proposed adjustor charges, or DSMACs, discussed below relate to DSM costs over and above those recovered through base rates.

Design and Functioning of the Adjustor

Basis for DSMAC. The Settlement Agreement proposes to change the Company's recovery of its program costs from the current historic basis to "more current recovery" of the type approved for Tucson Electric Power Company ("TEP") in Decision No. 70628. Decision No. 70628, on December 12, 2008, approved the TEP Proposed Settlement Agreement ("TEP Agreement") which set an initial funding level and adjustor rate (Section 9.2) and provided that, in ensuing years:

> "The total amount to be recovered by the DSM Adjustor mechanism *shall be calculated by projecting DSM costs for the next year. . . .*" (Section 9.5) [emphasis added]

Annual Re-set. Decision No. 70628 also provides that the amount recovered by TEP through its DSMAC would be adjusted annually by any over- or under-collections, and that performance incentives would be recovered through the DSMAC. Correspondingly, the Settlement Agreement with APS provided for the DSMAC to be reset yearly based on the same criteria.

The actual language of the APS Settlement Agreement with respect to the basis of recovery, the design of the adjustor mechanism and the components of the DSMAC is cited below:

> "14.6 The Signatories agree that it is reasonable for APS' DSMAC to be modified to achieve more current recovery of program costs, similar to the DSMAC approved for Tucson Electric Power Company ("TEP") in Decision No. 70628. New DSMAC rates for the upcoming year will be set by the Commission as part of its consideration of the Implementation Plan. The Implementation Plan shall also include a bill impact analysis. If approved, such rates would become effective with the first billing cycle in March. This will supersede existing DSMAC reset filing dates. The total amount to be recovered by the DSMAC *shall be calculated by projecting DSM costs for the next year*, adjusted by the previous year's over- or under-collection, and adding revenue to be recovered from the DSMAC performance incentive." [emphasis added]

Interest. Section 14.7 of the Settlement Agreement states that there will be no interest applied to under-recovered balances, but that APS shall apply interest to over-collected balances resulting in refunds to customers. The interest rate would be based on the one-year Nominal Treasury Constant Maturities rate in the Federal Reserve Statistical Release H-15, or its successor publication, and would be adjusted annually on the first business day of the calendar year.

Recovery of Unrecovered Fixed Cost. Section 14.8 of the Settlement Agreement provides the following:

> "APS shall not request recovery of unrecovered fixed costs ("UFC") as a component of DSM program costs until its next general rate case. APS agrees to an explicit exclusion of UFC from the definition of program costs. This provision will not preclude APS from seeking such recovery in other proceedings."

APS Proposal: DSMAC 1 and 2. In accordance with the Settlement Agreement, the DSMAC rate proposed by APS is based on projected energy efficiency spending for 2010. APS also proposes to recover its energy efficiency costs for 2009, meaning that historic 2009 costs and projected 2010 costs would be recovered at the same time, and through the same charge. To address this transition period for recovery, APS has proposed two alternative DSMAC charges. The first would recover all of its 2009 and 2010 costs during the recovery year beginning in March 2010 ("DSMAC 1"), and the second would recover all of the projected 2010 costs, but amortizes recovery of the 2009 costs over three years ("DSMAC 2").

Bill Impacts, APS-Proposed Alternatives (DSMAC 1 and DSMAC 2). The impacts, for Residential customers, based on estimated usage levels, are listed below. These impacts are estimates are for summer and winter usage, and reflect an average of all Residential customers:

Alternatives	Per kWh Charge	Estimated Winter Impact	Estimated Summer Impact
DSMAC 1 (APS Proposal)	$0.002053	$1.36	$2.05
DSMAC 2 (APS Proposal	$0.001680	$1.01	$1.52
DSMAC 1 (with Staff adjustment)	$0.002019	$1.32	$2.00
DSMAC 2 (with Staff adjustment)	$0.001646	$0.97	$1.48

Staff's Analysis and Recommendations. Staff recommends the approval of DSMAC 2, which amortizes the 2009 energy efficiency portfolio costs over three years, with the Staff adjustment which reflects the correct method for calculating the Performance Incentive. Staff

believes that the more gradual approach to recovery strikes a balance between timely recovery of the Company's costs and the need to lessen the impact on customers during a transition period when both historical and projected costs are being recovered.

Outside Audit. Given the high levels of ratepayer funding for the APS Energy Efficiency portfolio, and its complexity, Staff recommends that an audit be performed by an independent third party, separate from the Company's existing Measurement, Evaluation and Research portfolio component. The auditor is to be selected by Staff, in consultation with the Company. The audit will be performed at a time to be determined by Staff, and may include, but would not be limited to, the following elements:

- Verifying the correct installation of a sampling of DSM measures;
- Comparing projected and actual MWh savings required to meet the energy savings goal;
- Reviewing projected and actual net benefits;
- Comparing the performance incentive against savings achieved to confirm that the level of performance incentive corresponds with actual savings;
- Reviewing any other calculation relating to the portfolio or performance incentive;
- Reviewing the program costs for appropriateness;
- Comparing the projected and actual energy efficiency performance of program measures;
- Comparing projected and actual program participation;
- Determining whether fuel switching is taking place;
- Reviewing a sampling of documentation relating to the payment of incentives; and

- Determining whether any baselines utilized for determining energy savings should be reset due to changes in standards.

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Utilities Division

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ORIGINATOR: Julie McNeely-Kirwan

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 ITS 2010 ENERGY EFFICIENCY IMPLEMENTATION PLAN	DOCKET NO. E-01345A-08-0172 DECISION NO. _____ ORDER

Open Meeting
January 12 and 13, 2010
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

Background

1. Arizona Public Service Company ("APS" or "the Company") provides electric service 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, Pima, Pinal, Yavapai and Yuma. The Company services over 1.1 million customers in Arizona, including approximately 978,000 Residential and 119,000 Commercial customers.

3. On July 15, 2009, APS filed an application in compliance with the provisions of the Proposed Settlement Agreement (the "Settlement Agreement") filed on June 12, 2009, in the APS Rate Application Docket (Docket No. E-01345A-08-0172). The APS 2010 Energy Efficiency

. . .

Implementation Plan ("the Plan") sets out the programs and measures by which APS plans to meet the energy savings goals agreed upon in the Settlement Agreement.

4. On December 2, 2009, Staff filed a memorandum and proposed order with respect to the following four Implementation Plan elements:

Residential

- Low income Weatherization (existing program; multiple enhancements)
- Appliance Recycling (new program)

Non-Residential

- Schools program (existing program; increase in customer cap)
- Self Direction (new portfolio component)

5. In Decision No. 71444 (December 23,2009), the Commission voted to approve the four program elements, as modified and amended.

Settlement Agreement Requirements

6. The Demand-Side Management ("DSM") provisions of the Settlement Agreement required that the Plan include the following general elements: new or expanded programs and program elements necessary for achieving the 2010 energy efficiency goals; the estimated energy savings by program; and a range of estimated program costs by program necessary to meet the goals.

7. The Settlement Agreement includes the following specific elements:

i. A customer repayment/financing program element for schools, municipalities and small businesses fully integrated in the non-residential programs;

ii. A goal to install DSM measures through existing or enhanced program measures for at least 100 schools by December 31, 2010;

iii. A review of the APS low-income weatherization program for possible enhancement;

iv. A Residential Existing Homes Program with the new Home Performance element and the existing HVAC element, with a goal of serving 1,000 existing homes by December 31, 2010;

v. A non-residential high performance new construction program element with a second tier of performance and a higher financial incentive; and

. . .

vi. A residential high performance new home program element with a second tier of performance and a higher financial incentive, which APS was to file with the Commission on or before June 30, 2009.

8. The Company's proposals l to increase the school district cap (relates to Item (ii)) and to enhance f the Low Income Weatherization program (Item iii) were addressed in the December 2, 2009, filing, and in Decision No. 71444.

Scope of Review

9. Summarized descriptions will be provided for existing programs, but the focus of Staff's review and analysis will be new programs, new portfolio components and program enhancements. Measures previously determined by Staff to be cost-effective will not be re-evaluated for cost-effectiveness at this time, unless new information indicates that re-evaluation is necessary.

10. The remaining plan elements will be addressed herein, with the exception of the Residential New Construction (Energy Star Plus) Program, which will be reviewed separately. The Implementation Plan elements being reviewed are listed below:

Residential

- Consumer Products (existing program; three new measures)
- Residential Existing Homes (existing program; adds Home Performance enhancement)

Non-Residential

- Non-Residential New Construction (existing program; adds second performance tier)
- Non-Residential Customer Repayment Financing Program (new portfolio component)
- Non-Residential Existing Facilities program (no new measures or significant changes; impacted by other changes to the portfolio)

Overall Portfolio

- Demand-Side Management Adjustor charge (recovery for program costs)

- Performance Incentive
- Budget increases for existing programs.

RESIDENTIAL PROGRAMS

Consumer Products

11. *Existing Program Description*. APS proposes to add three measures to the existing Consumer Products program. The current program provides discounted Compact Fluorescent Lamps ("CFLs") to residential APS customers. APS negotiates agreements with lighting manufacturers and retailers, who pass the discounted prices on to consumers. Customers are then referred to participating retailers. Consumer education and sales training for retailers are also provided under the program.

12. *Proposed Program Enhancements*. APS is proposing to add three new measures: (i) variable-speed pool pumps with energy-efficient motors; (ii) dual-speed pool pumps with energy-efficient motors; and (iii) smart digital pool pump timers. The enhanced program would provide incentives to consumers, retailers and installers to help cover the incremental cost of these three measures, and the costs associated with correct calibration and added paperwork. It would also provide training to distributors and installers on the correct installation of the more efficient pool pumps.

13. *Budget Allocations*. APS proposes to increase the budget by $1,114,000 (to $6,752,000) to cover incentives and program delivery costs for the new measures. The allocations for the new measures are listed below, by measure and category of expenditure. (For information on the budget for the entire program, inclusive of CFLs, please see the table in the section entitled, Budget Allocation, Current and Proposed.)

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2010	Variable-speed Pump Motors	Two-Speed Pump Motors	Smart Timers	Total Per Category
Incentives	$486,000	$22,000	$113,000	$621,000
Program Delivery (non-incentive costs)[1]	$369,000	$25,000	$99,000	$493,000
Total Budget	$855,000	$47,000	$212,000	$1,114,000

14. APS has allocated a much smaller budget for the two-speed model. In response to Staff's data request, APS stated that the allocations for the pool pump measures were based on sales data from existing rebate programs in California and Nevada, where sales of two-speed models were significantly lower than those for variable-speed pool pumps. The Company also focused on variable-speed pool pumps due to their higher savings, and because the pool pump market is trending toward the variable-speed models. (Additional information regarding the specific measures is discussed further herein.)

15. The budget allocations proposed for the entire Consumer Products program, including costs for the existing program and measures, are listed in the table below:

Year	2010
Rebates and Incentives	$4,212,000
Training and Technical Assistance	$12,000
Consumer Education	$30,000
Program Implementation	$1,968,000
Program Marketing	$331,000
Planning and Administration	$199,000
Total Budget	$6,752,000

16. *Duel Speed and Variable-speed Pool Pumps*. Pool pumps are used to circulate pool water through a filter, to keep the water clean and prevent the growth of algae. Inefficient pumps can be among the largest users of a home's power, but efficient pumps and timers can significantly

[1] The lower projected participation for the two-speed measures means that the fixed costs would be spread over relatively few installations, making program delivery costs higher per installation. In addition, since this would be the year the pool measures were introduced, the costs of ramping up the additional measures (such as training and programming) would add to higher delivery costs for all three measures.

reduce that usage. Dual-speed pool pumps with timers can save over 1,000 kWh annually[2], while variable-speed pool pumps can save approximately 2,000 kWh annually. More efficient pool pumps can also last longer, offer improved pool cleanliness and run more quietly. The incremental cost for both types of pumps, however, is significantly higher than for standard models. APS estimates an incremental cost for the two-speed pool pump (with timer) of $229, while the incremental cost of the variable-speed pool pump is estimated at $650. The proposed incentives would cover part of these incremental costs. (See the section on Incentives, below.)

17. *Smart Digital Pool Pump Timer*. A pool pump timer controls the functioning of a pump, to optimize efficiency and limit breakdowns due to overuse of the pump. The smart digital pool pump timer is used with existing pool pumps, to replace mechanical timers. These smart timers produce savings by automatically reducing pool pump run times during cooler months, when pools are less frequently used.

18. *Incentives*. APS is proposing a total $270 incentive for variable-speed pool pumps, and a total rebate of $110 for the two-speed model, and a $75 rebate for pool pump timers. The proposed incentives are listed below:

Measure	Distributor/Retailer Incentive (Passed on to customer)	Contractor/Installer Incentive (for proper calibration of pool pump motor)	Document Filing Incentive (to Distributor/Retailer)	Total Incentive Per Measure
Variable-speed pool pump motor and timer	$200	$50	$20	$270
Two-speed pool pump motor and timer	$100	$0	$10	$110
Measure	**Consumer Instant Rebates**	**Contractor Incentive**	**Document Filing Incentive**	**Total Incentive Per Measure**
Pool pump motor digital smart timer	$75	$0	$0	$75

[2] Cost-effective energy savings are unlikely to be achieved with a two-speed pump, unless there is also a timer. For this reason, the two-speed measure includes a timer (not assumed to be seasonal/smart timers) with the pool pump. Variable-speed pool pumps usually have a built-in timer (although not a smart timer).

19. Under the program, pool pump incentives would be provided to customers through retailers/distributors and contractors/installers. (In some cases, the same company will both sell and install the pool pumps.) The Company indicates that this method of delivery is more convenient for customers. Working through the retailers/distributors and contractors/installers also makes it easier for APS to ensure that the variable pool pump motors are properly calibrated[3], which enhances the energy savings available from this measure. APS requires that participating retailers/distributors and contractors/installers submit documentation in order to demonstrate that the discounts have been passed on to customers.

20. For smart timers, APS is proposing an instant rebate for consumers, to encourage participation. The Company is currently planning to provide a discount to the customer at the time of purchase, through participating retailers and installers. A retailer or installer would then request reimbursement from APS, submitting a rebate form, invoice and a copy of the customer's bill. Alternatively, APS is considering a mid-stream buy down from the manufacturer, similar to that done for the CFL measure. Staff has recommended that the Company report whether it has chosen the instant rebate or buydown in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission.

21. *Incentives; Other States*. Practices in other states vary. Some utilities offer lower pool pump rebates for the two-speed pool pump, as compared to the variable pool pump, or offer rebates only for the variable-speed pool pump. In Nevada, NV Energy, for example, offers a $50 rebate for efficient two-speed pumps, and a $100 rebate for efficient variable-speed pumps, while Austin Energy offers a $200 rebate only for qualified variable-speed pumps and motors. Pacific, Gas and Electric in California ("PG&E") notes on its website that Title 20 of the California appliance standards now requires two-speed pool pumps as a minimum and that, as a result, it will no longer offer a rebate for two-speed models after January 1, 2010. Rebates of $100 for variable-speed pool pumps will, however, continue to be offered. Several other California utilities have equal incentives for variable and two-speed pool pumps, including Southern California Edison

[3] Calibration is provided under the program to optimize the run times and savings.

($200), San Diego Gas and Electric ($100) and Pasadena Water and Power (for two-speed, four-speed and variable; $200 purchased outside Pasadena; $250 purchased within Pasadena).[4]

Staff Analysis and Recommendations on Proposed Program Enhancements

22. *Cost-Effectiveness*. Staff estimates the benefit-cost ratio of the two-speed pool pump at 1.57 and the variable-speed pool pump at 1.22. The significantly higher incremental cost of the variable-speed pool pump negatively impacts its cost-effectiveness, as compared to the two-speed. Staff notes, however, that the incremental cost of newer and more energy-efficient equipment usually decreases over time and with wider adoption.

23. *Staff Recommendation: Two-Speed and Variable Pool Pumps*. More efficient pool pumps are not only producing energy savings as a cost-effective measure, but may also offer program participants improved performance with respect to lifespan, noise levels and cleaning capability. Staff has recommended that two-speed and variable pool pumps be approved as new measures for the Consumer Products program.

24. *Staff Recommendation: Pool Pump Timers*. Staff estimates the benefit-cost ratio for the pool pump timer measure at 2.01, but this is dependent on the energy savings being similar to what has been predicted. Pool pump timers, like programmable thermostats, can not be cost-effective unless they are set and used in a way that provides sufficient energy savings. While pool pumps are less tied to immediate comfort than programmable thermostats, with less impetus for customers to override or re-set a pool pump timer, Staff is concerned that savings could be lower than expected. (This is particularly true in light of the limited information available on pool pump programs elsewhere.)

25. Staff has recommended that APS complete its review of the savings data once there is 12 months of data, and that the Company file a letter on the results of its review no later than April 1, 2011. The letter should address the participation levels for this measure and should state whether or not the timer measure results in cost-effective energy savings. Staff has also

[4] Staff reviewed information on the relevant websites, but found no indication regarding whether the rebate structure would be changed, as with PG&E, in response to the new California appliance standards.

recommended that timers cease to be included as a measure eligible for rebates unless savings from the timers can be verified by the Company.

26. *Reporting Requirements*. Staff has recommended that APS continue to report on the Consumer Products program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission. Staff has also recommended that the reporting include information and data on the new, or enhanced, program components approved by the Commission. The information and data reported should include the number of customers participating, the level of spending for energy efficiency measures, the level of spending associated with non-energy-efficiency measures, the number of measures installed, by type of measure, and the estimated energy and environmental savings arising from this portfolio component, along with any other information necessary for the Commission to understand the progress and status of the program.

27. Staff has recommended that the Consumer Products Program be approved, with the program enhancements, as modified by Staff recommendations.

Residential Existing Homes

28. *Existing Program Description.* Residential Existing Homes HVAC is an ongoing program that promotes the replacement of split and package whole-house air conditioners and heat pumps in existing homes with energy-efficient equipment. The program also promotes the quality installation of energy-efficient replacement equipment and the repair and replacement of leaking duct systems.

29. *Proposed Program Enhancements*. The Settlement Agreement, Section 14.11, adds a Home Performance element to the program and sets a goal for the number of homes to be served by the end of 2010:

> "APS will have a Residential Existing Homes Program, which will include both a new Home Performance element and the existing HVAC element. The goal of the Home Performance element will be to serve at least 1,000 existing homes by December 31, 2010."

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30. The Settlement Agreement also outlines the features of the new component, which begins by identifying opportunities to improve a home's energy efficiency using an on-site home energy audit, or assessment.

> "These customers will be served by conducting an on-site energy assessment, direct installation of some energy saving measures (e.g. lighting, air sealing), and delivering information and incentive offers on a comprehensive set of recommended measures for consideration by the customer."

31. Measures that must be included in the enhanced APS program are specified in the Settlement Agreement, and are required to accord with the Energy Star program.

> "The customized list of recommended measures shall include items such as insulation, duct repair and HVAC improvements to save energy, consistent with the national EPA/DOE Home Performance with ENERGY STAR program;" (Section 14.11, paragraph d.)

32. Attachment 2 of the Implementation Plan provides details on how the Company proposes to enhance the Residential Existing Homes program in accordance with the provisions of the Settlement Agreement. In summary, it describes the Home Performance with Energy Star ("HPwES") component as designed to: (i) help residential customers identify energy efficiency opportunities through energy audits; and (ii) provide customers with incentives to make the energy-related improvements identified in the audit.

33. *Proposed Budget; Enhancements*. The proposed budget for the Home Performance element is show in the table below:

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2010	Air Sealing	Attic Insulating and Sealing	Duct Repair (HPwES)[5]	Shade Screens	Direct Install: Shower-head	Direct Install: Aerators	Direct Install: CFLs	Home Audit	Total
Incentives	$125,000	$125,000	$100,000	$50,000	$31,200	$11,400	$16,000	$200,000	$658,600
Program Delivery[6]	$248,000	$197,000	$128,000	$97,000	$22,500	$7,500	$0	$0	$700,000
Total	$373,000	$322,000	$228,000	$147,000	$53,700	$18,900	$16,000	$200,000	$1,358,600

34. *Proposed Budget; Entire Program*. The proposed budget for the revised program, as a whole, is shown in the table below:

Year	2010
Rebates and Incentives	$3,519,000
Training and Technical Assistance	$88,000
Consumer Education	$279,000
Program Implementation	$1,200,000
Program Marketing	$598,000
Planning and Administration	$223,000
Total Budget	$5,907,000

35. *Cost-Effectiveness*. Staff reviewed the cost-effectiveness of the enhanced measures associated with the proposed new Home Performance component (with the exception of the Duct Test and Repair measure, which is part of the existing program, and has been previously reviewed for cost-effectiveness). Staff's review indicated that all of the proposed Home Performance measures were cost-effective, based on kWh savings alone (in some cases, there were also natural gas savings arising from the same measures.) The benefit-cost ratios estimated by Staff for the six new program measures are reported in the table below:

New Measure	Air Sealing	Attic Insulation and Repair	Window Shade Screens	Showerheads	Aerators	CFLs
Staff's Estimated Benefit-Cost Ratio	1.14	1.03	1.05	1.28	3.23	7.16

[5] Home Performance with Energy Star.

[6] Air Sealing, Attic Insulation and Sealing, Duct Repair and Shade Screens have comparatively high installation costs for customers, so fewer customers will install these measures, making the fixed costs per installation higher. In addition, since this would be the first year for the Home Performance component, the costs associated with ramping up the component (such as training and programming) would add to higher program delivery costs. As the program matures and participation increases the program delivery costs per unit should decrease.

36. *Reporting*. Staff has recommended that APS continue to report on the Residential Existing Homes program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission, and that the reporting include information and data on the new, or enhanced, program components approved by the Commission. Progress in meeting the goal set in the Settlement Agreement should be monitored and reported, as should information about any barriers to meeting this goal. The information and data reported should also include the level of spending for energy efficiency measures, the level of spending associated with non-energy-efficiency measures, the number of measures installed by type of measure, and the estimated energy and environmental savings arising from this portfolio component, along with any other information necessary for the Commission to understand the progress and status of the program. In addition to any issues concerning the participation goal from the Settlement Agreement, any other ongoing problems and their proposed solutions should also be reported.

37. *Staff Recommendation*. The Home Performance measures proposed by the Company are cost-effective and likely to improve the energy efficiency of existing Residential homes, while also lowering customer bills. Staff has recommended that the new Home Performance component proposed for the Residential Existing Homes program be approved.

NON-RESIDENTIAL PROGRAMS

Non-Residential New Construction

38. *Existing Program Description*. The existing Non-Residential New Construction program currently consists of six major components:

i. Study Incentives and Design Assistance. This element promotes the use of studies to identify individual measures or whole-building approaches that result in improvement at least 10% more efficient than the current building standard;

ii. (ii) Measure Incentives. This component provides incentives for building owners and developers to invest in energy efficiency;

iii. (iii) Trade Allies. The program promotes energy efficiency through a network of energy engineers, architects, contractors and consultants;

iv. (iv) Outreach and Training. The program also provides energy efficiency training classes to customers, developers and trade allies;

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v. (v) Technical Support. Provides direct contact and services to facilitate the adoption of energy efficient technologies and design practices.; and

vi. (vi) Tracking, Quality Assurance and Administration. This component provides for the required tracking of program activities and results.

39. *Proposed Program Enhancement*. The Settlement Agreement provides for "[a] non-residential high performance new construction program element with a second tier of performance and a higher financial incentive." The Implementation Plan proposes to satisfy this requirement by adding a Whole Building Design component to the existing program, for savings achieved "by integrating the design of the building envelope, HVAC systems and lighting systems"[7], using the ASHRAE 90.1 2007 building standard as a baseline. The Whole Building Design component would provide incentives to both owners and developers and building design teams, with progressively higher incentives for progressively higher savings.

40. *Eligibility*. Non-Residential customers of all sizes are eligible for the Non-Residential New Construction program, however, the primary market is likely to be customers with billed demand of more than 100kW. Non-Residential customers of this size include large, office, retail outlets and groceries, resorts and large hotels, colleges and universities and inpatient healthcare facilities. The Non-Residential New Construction program is open to both new construction and major renovation projects. The proposed Whole Building Design component, if approved, would also be open to customers with either new construction or major renovations projects.

41. *Incentives; Building Design Teams*. The proposed building design team incentives are new, and APS has indicated that these are crucial to achieving significant savings from the Whole Building Design component. The incentives are designed to overcome cost- or time-investment barriers to creating energy-efficiency focused designs. Building design team incentives have been used in programs in multiple other states, including Massachusetts, New York, Oregon and California.

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[7] Implementation Plan, Attachment 5, page 3.

42. *Incentives; Ranges and Caps*. Under the Whole Building Design component, incentives for owners/developers would range from $0.10 to $0.26 per kWh saved during the first year of operation. The incentives would be tied to savings ranging from 10% to 30% above the ASHRAE 90.1 – 2007 baseline. Incentives for building teams would range from $0.04 to $0.12 per kWh saved during the first year of operation, also for savings ranging from 10% to 30% above the ASHRAE 90.1 – 2007 baseline. The measure cap for the new component would be 75% of the incremental cost, up to $300,000 per customer, per year, for owners/developers. In communication with Staff, APS has also proposed a separate cap of $125,000 per building design team, per year, as being reasonable and scaled to the customer cap. Incentives would be provided only once APS has received final design plans and documents, and these would undergo review to determine their adherence to the required energy efficiency measures.

43. *Budget*. The proposed budget for the enhanced Non-Residential New Construction program is set forth in the table below.

Year	2010
Rebates and Incentives	$3,547,000
Training and Technical Assistance	$75,000
Consumer Education	$25,000
Program Implementation	$1,053,000
Program Marketing	$564,000[8]
Planning and Administration	$173,000
Total Budget	$5,437,000

44. *Cost-Effectiveness*. APS informed Staff that the cost-effectiveness of the new Whole Building component was based not only on the combined energy savings provided by the measures individually, but on simulations that also include energy savings arising from the interaction of the measures. (One example is more efficient lighting that generates less heat, thereby reducing the air conditioning load.) Staff's review indicated that the proposed Whole Building Design component is cost-effective, and Staff estimated the benefit-cost ratio at 1.48.

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[8] For the entire program, including promotion of the new Whole Building Design component.

45. *Reporting*. Staff has recommended that APS continue to report on the Non-Residential New Construction program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission, and that the reporting include information and data on the new, or enhanced, program components approved by the Commission. The information and data reported should include the number of customers participating, the level of spending for energy efficiency measures, the level of spending associated with non-energy-efficiency measures, the number of measures installed by type of measure, and the estimated energy and environmental savings arising from this portfolio component, along with any other information necessary for the Commission to understand the progress and status of the program. Any ongoing problems and their proposed solutions should also be reported.

46. *Staff Recommendation*. Staff has recommended that the Whole Building Design component, proposed as an addition to the Non-Residential New Construction Program, be approved. Staff has also recommended that the building design team incentive be approved, with the proposed per building design team annual cap of $125,000.

Non-Residential Customer Repayment Financing Option

47. *Description*. Non-residential Customer Repayment Financing option is a new portfolio component. The Settlement Agreement provided that the Implementation Plan would include the following:

> "A customer repayment/financing program element for schools, municipalities and small businesses fully integrated in the non-residential programs. This customer repayment element must be fully integrated from the perspective of the customer and not a separate offering. APS may use an actual on-the-bill or a parallel bill approach to implement this provision. Financing costs (including any default or guarantee cost) will be fully recoverable as a program cost. Any financing provided directly by APS will be at its weighted average cost of capital (if APS buys down the financing rate for the end-using customer, the differential between APS' cost of capital and such reduced rate will also be recovered as a program cost);"

48. The Implementation Plan states that the proposed customer repayment financing program element for schools, municipalities and small businesses would be fully integrated into

the following three non-residential programs: (i) Large Existing Facilities; (ii) Small Business and (iii) Schools. APS plans to offer direct monthly billing using a bill parallel to customers' monthly electric bills, and states that the program "will be offered to give qualified customers a choice on how to fund their APS Solutions for Business energy efficiency projects." APS Solutions for Business rebates will be used to reduce the customer's monthly loan payment.

49. *Third Party Financing Partner*. APS anticipates that it will be successful in reaching an agreement with a provider for third party financing. In October 2009, providers were asked to present their programs to APS, and in November 2009, the Company entered into discussions with the preferred third party financing partner. APS is now working through details of the Repayment Financing Program.

50. *Eligibility to Participate in the Repayment Financing Program*. In response to a data request from Staff, APS indicated that it was considering the following minimum requirements for customers to apply to the program:

(i) Applicants would have to be eligible to participate in the APS Business Solutions program. The Solutions for Business Program already ensures that participants are APS customers and that they qualify for the Solutions for Business program;

(ii) Applicants would have to be in business and under the same management for at least two years;

(iii) Applicant owners must not have filed for bankruptcy;

(iv) Applicants must have been APS customers for a minimum of one year and must be current on their bills; and

(v) Applicants must meet the financing provider's minimum underwriting standards.

51. *Establishing Creditworthiness of Program Applicants*. The financing provider would determine the creditworthiness of applicants, with input from APS. The Company's goal is to strike a balance between allowing as much participation as possible, while still limiting the size and number of defaults in order to keep down program costs. The requirements for establishing creditworthiness currently under consideration include the following:

Small Businesses

(i) Filling out a loan application;

(ii) Providing two years of business tax returns;

(iii) Providing current interim balance sheets and income statements;

(iv) Providing two years of personal tax returns; and

(v) Providing a personal financial statement.

Schools and Municipalities

(i) Filling out a loan application;

(ii) Providing two years of business tax returns; and

(iii) Providing a current interim balance sheet and income statement.

52. *Defaults*. Program loans would be unsecured. None of the loans would be guaranteed. Any default costs would be charged to the program and would be fully recoverable, as stated in the Settlement Agreement. The financing provider will track all loans, including loans in default, and report to APS at least once a month.

53. *Collection*. The financing provider would use normal and customary collection efforts on loans which are past due. Loans would be considered past due once they are 11 days overdue. At this time, the financing provider would begin collection efforts, including letters and telephone calls. At 90 days past due, the financing provider would turn the loan over to an internal collections group, which would pursue legal remedies based on the recovery potential of the loan. Also at 90 days past due, the financing provider would charge APS for the total outstanding amount of the loan, and any other related costs. Any subsequent amounts collected on the loan would be reimbursed to APS.

54. *American Recovery and Reinvestment Act of 2009 Act ("ARRA")*. In the Implementation Plan the Company stated that it would advise its customers on the availability of ARRA revolving loan funds that could be used as a financing alternative. At that time, the Arizona State Department of Commerce Energy Office was planning to offer a $2 million revolving energy loan fund, utilizing ARRA monies. Since then, plans for a revolving energy loan fund have been dropped in favor of establishing a grant fund for renewable and energy efficiency

businesses that want to retool or expand.[9] APS is not aware of any other revolving loans funds arising from ARRA monies.

55. *Budget for the Non-Residential Customer Refinancing Repayment Element*. The revolving loan fund and its associated budget are set out in the table below, to illustrate the funding level and costs associated with Customer Refinancing Repayment Element. (Additional descriptions of these elements are supplied in the following paragraphs.) Please note that while the costs associated with implementing and maintaining the Non-Residential Customer Refinancing Repayment option are set out separately, herein, the administrative and default costs are actually part of the proposed budgets for the Large Existing Facilities, Small Business and Schools programs. In keeping with the language of the Settlement Agreement[10], there is no separate budget for the repayment option.

Loan Fund	Estimated Amount
Revolving Loan Fund	$10,000,000
Administrative and Default Costs per Program	Estimated Amounts
Large Existing Facilities	$100,000
Small Business	$100,000
Schools	$100,000
Administrative and Default Costs Total	$300,000

56. *Revolving Loan Fund*. APS initially estimated $10 million as the amount for the revolving loan fund. If the Company is able to bring in a third party financing provider, loans would not necessarily be capped at $10 million. Instead, the amount loaned under the repayment option would depend on marketplace demand.

57. *Costs*. In addition to the revolving loan fund, the Company has estimated $300,000 in costs associated with the repayment option. As stated elsewhere herein, costs are imbedded in the budgets for the three non-residential programs that include repayment financing as an option ($100,000 each for Large Existing Facilities, Small Business and Schools). The $300,000 in costs

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[9] Based on information from APS and from the Commerce Energy Office.

[10] "This customer repayment element must be fully integrated from the perspective of the customer and not a separate offering."(14.11, d.).

cover the following: (i) first year default costs; (ii) IT for developing on-bill/parallel billing; (iii) developing and maintaining the program; (iv) training for contractors to help promote the program; and (v) collateral materials promoting the financing option.

Staff Analysis and Recommendations.

58. *Reporting*. Staff has recommended that APS report on the Non-Residential Customer Repayment Financing program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission. The information and data reported should include the number and size of the loans, the number of borrowers in each classification (schools, small businesses or municipalities), the number and size of the loans in default, the total amount found to be uncollectible, and any other information necessary for the Commission to understand the progress and status of the program. Any ongoing problems and their proposed solutions should also be reported.

59. *Additional Reporting Recommendation*. Staff has also recommended that any default, or group of defaults, that would significantly affect the functioning of the Non-Residential Repayment Financing Program be reported to the Commission within 30 days of APS being notified, or otherwise becoming aware, of the affecting default or defaults.

60. Staff has recommended approval of the Non-Residential Repayment Financing Program. Staff has also recommended that APS work to modify the loan requirements, or otherwise modify this program element, if it becomes necessary to address unanticipated problems.

Non-Residential Existing Facilities

61. The Company has not proposed to make any significant changes to this program, aside from an increase to its budget. This section is intended as a summary of the program and the changes to the portfolio (as opposed to the program itself) that are likely to affect it. Portfolio changes that impact this program (the Self Direction and Customer Repayment Financing options) are discussed at more length elsewhere in this document, or in Decision No. 71444 .

62. *Description*. Non-Residential Existing Facilities is an existing program for which APS has proposed no new measures. The program targets non-residential customers with an

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aggregated monthly demand greater than 100 kW, and provides incentives for energy efficiency improvements relating to lighting, HVAC, motors, building envelopes, and refrigeration.

63. *Changes*. Although no new measures have been proposed, APS has proposed a substantial increase to the budget, from $6,261,000 to $10,910,000 (see the section entitled "Budget Increases for Existing Program.") However, eligible non-residential customers would be able to take part in the Self Direction program (see Decision No. 71444), and/or the Non-residential Customer Repayment Financing option If approved by the Commission, these funding options create a potential for higher levels of participation by non-residential customers. The Company has not proposed any other significant changes to the Existing Facilities program. (The increased budget and the Customers Repayment Financing option are discussed in more detail herein; the Self Direction program is discussed in more detail in Decision No. 71444.)

64. *Reporting*. Staff has recommended that APS continue to report on this program in its semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission. In addition, the Company should report on how the financing and Self Direction options have impacted participation.

OVERALL PORTFOLIO

Eligibility for Incentives

65. *Adjusting the Baseline*. Staff has recommended that no measure be eligible for incentives unless it provides energy savings over and above the current standard. When energy efficiency standards change, due to legislation, market transformation, or through other means, the baseline for program measures should be adjusted accordingly.

Budget Increases for Existing Programs

66. The budget increases for the APS portfolio of energy efficiency programs arise from the following: (i) enhanced existing measures; (ii) new measures for existing programs; (iii) the new Residential Recycling Program; (iv) the costs associated with the refinancing option; and (v) Measurement, Evaluation and Research. (The performance incentives and the manner in which they should be calculated are discussed separately herein, in the section entitled "Performance Incentives.")

Program	Current (2009) Budget[11]	Proposed Increase from New Measures	Proposed Increase from Existing Measures	Proposed Total (with increases from new and existing measures)
Low Income Weatherization	$1,567,000	-0-	$746,000	$2,313,000
Residential Existing Homes	$2,801,000	$1,358,600	$1,747,400	$5,907,000
Residential New Home Construction	$1,818,000	$400,000	$200,000	$2,418,000
Consumer Products	$4,061,000	$1,114,000	$1,577,000	$6,752,000
Refrigerator Recycling	n/a (new program	$1,428,000	n/a (new program)	$1,428,000
Residential Total	$10,247,000	$4,300,600	$4,270,400	$18,818,000
Large Existing Facilities	$6,261,000	$100,000	$4,549,000	$10,910,000
New Construction	$1,671,000	-0-	$3,766,000	$5,437,000
Small Business	$2,225,000	$100,000	($121,000)[12]	$2,204,000
Schools	$1,060,000	$100,000	$1,896,000	$3,056,000
EIS	$186,000	-0-	$9,000	$195,000
Non-Residential Total	$11,403,000	$300,000	$10,099,000	$21,802,000
Portfolio Total	$21,650,000	$4,600,600	$14,369,400	$40,620,000
Measurement, Evaluation and Research ("MER")	$1,000,000	n/a	$1,300,000[13]	$2,300,000
Total with MER	$22,650,000	$4,600,600	$15,669,400	$42,920,000

67. Increased funding is necessary for APS to meet higher energy efficiency standards. Staff has recommended that the increased budgets for each program or portfolio element of the APS 2010 Energy Efficiency Plan be approved, so long as the program or portfolio element has itself been approved by the Commission. Any approved changes to a proposed program or program element that would have a significant impact on its budget should be taken into account,

[11] On December 29, 2009, APS filed a letter in docket E-01345A-07-0712 notifying the Commission that it was shifting funding in accordance with Decision Nos. 68648 and 70637, in order to avoid interruptions to the Residential Existing HVAC and Non-Residential New Construction programs.

[12] The Small Business budget for 2010 decreased slightly due to a lower-than-expected participation rate arising from the economic downturn and difficulties in reaching this market segment. APS anticipates reaching its projected budget for 2010.

[13] Increase due to the increased effort required to monitor and evaluate additional measures and generally larger energy efficiency portfolio.

when approving the budget for that program or portfolio element. (The recommendation to approve the enhanced budgets does not include the performance incentive, which is dealt with in another section.)

68. Staff has also recommended that the Company be allowed to shift funding from less active to more active programs, for up to 25% of the budget for the less active program. This should be limited to cases where the more active programs have exhausted their budgets, or will do so in the near future. Any budget shifting should be done within, and not between, the Residential and Non-Residential program sectors.

69. *Reporting Requirements*. Staff has recommended that, in addition to the other reporting requirements discussed herein, any budget shifts should be reported in the semi-annual report filed with the Commission, or in any succeeding form of report ordered by the Commission.

Performance Incentive

70. *Annual Energy Savings Goals*. The Performance Incentives are based on the level of energy savings APS achieves relative to its annual energy savings goals. The APS Energy Efficiency annual energy savings goals are 1.0% in 2010, 1.25% in 2011 and 1.5% in 2012. (Section 14.1 of the Settlement Agreement states that the goals are "a percent of total energy resources needed to meet retail load.") If higher requirements and/or performance incentives are adopted by the Commission for 2010, 2011 or 2012 in another docket, those higher goals or performance incentives would supersede those listed in Section 14.1.

71. In its Implementation Plan, APS sets forth the estimated MWh savings required to meet the annual energy savings goals in 2010, 2011 and 2012, as listed in the Settlement Agreement:

Year	Estimated MWh	Percentage of total energy resources
2010	320,000 MWh	Estimated to be 1.00% of total energy resources in 2010
2011	400,000 MWh	Estimated to be 1.25% of total energy resources in 2011
2012	490,000 MWh	Estimated to be 1.50% of total energy resources in 2012

72. *Basis for Calculating Performance Incentives and Caps*. Performance incentives would first be calculated based on the Company's achievement relative to these Energy Efficiency

requirements, then capped, or limited, based on the program costs. Section 14.2 of the Settlement Agreement is quoted below:

> "The existing performance incentive for energy efficiency programs shall be modified to be a tiered performance incentive as a % of net benefits, capped at a tiered % of program costs."

73. Set forth below is the Settlement Agreement table listing the performance incentive for each level of achievement relative to the energy efficiency goals, and the performance incentive caps, which are based on percentages of program costs:

Achievement Relative to the Energy Efficiency Goals	**Performance Incentive as % of Net Benefits**	**Performance Incentive Capped at % of Program Costs**
Less than 85%	0%	0%
85% to 95%	6%	12%
96% to 105%	7%	14%
106% to 115%	8%	16%
116% to 125%	9%	18%
Above 125%	10%	20%

74. *Issue 1 Regarding Basis for Caps*. In the Implementation Plan, APS asserts that any performance incentive it receives should be capped based on program costs *which include the performance incentives*. The Implementation Plan states the following:

> "Assuming APS meets 100% of the energy efficiency goal, the maximum performance incentive is 14% of the total energy efficiency program cost. By definition, these program costs include the performance incentive (see Attachment A, paragraph 45 of Decision 67744). Therefore, the performance incentive is 16.28% of the energy efficiency program cost before the performance incentive is added in."

75. Staff does not agree that the cap on performance incentives should be based on program costs that include performance incentives. One reason is that the performance incentive methodology cited by APS (paragraph 45 of Decision No. 67744) bases the cap on *DSM spending* that includes performance incentives, not on *program costs,* with or without the addition of performance incentives. The actual language of Decision No. 67744 states that "Such

performance incentive will be capped at 10% of the total amount of *DSM spending*, inclusive of the program incentive[14], provided for in this Agreement. . . ." *[emphasis added]*

76. Another reason for Staff's disagreement is that the proposed Settlement Agreement bases the cap on program costs alone ("capped at a tiered % of program costs")[15] and, if approved, this methodology for calculating the cap would supersede the methodology described in Decision No. 67744. In addition, the Settlement Agreement clearly indicates that performance incentives should be based on the Company's energy efficiency achievements. Calculating the cap in the manner proposed by APS would mean that the performance incentive would be increased by costs unrelated to creating energy savings, which is plainly not the intent of the Settlement Agreement.

77. *Impact of Including Performance Incentives in Program Costs*. In the example used by APS, the Company has met 100% of its energy savings goal of 320,000 MWh, and could receive a performance incentive of up to 7% of the $109,047,000 in Net Benefits ($7,633,290), but this amount is subject to the cap on performance incentives (14% of the program costs). The next step is then to establish the cap, or limit, on the performance incentive, based on program costs.

78. *Calculating the Cap*. Based on Staff's analysis of the APS example, the impact of including performance incentives in program costs for purposes of calculating the cap is significant, as illustrated by the comparison below.

- Scenario 1:14% of Program Costs (Not Including Performance Incentive): In Scenario 1 the cap would be calculated based on the program costs, which equal $42,920,000 (this includes Measurement, Evaluation and Research costs, but not the performance incentive). At 14% of $42,920,000, the cap would be $6,008,800.

- Scenario 2;:14% of Program Costs *Plus* Performance Incentive : In Scenario 2, as proposed by the Company, the cap would be calculated based on the program costs *plus* the performance incentive, or the $42,920,000 in program costs *plus* $6,987,000 in performance incentives.[16] In this scenario the cap would now be $6,987,000 (rounded), or 14% of $49,907,000.

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[14] The reference to a "program incentive" rather than a "performance incentive" is presumed by Staff to be unintentional.

[15] For the definition of program costs see the Electric Energy Efficiency standards: "[T]he expenses incurred by an affected utility as a result of developing, marketing, implementing, administering, and evaluating Commission-approved DSM programs."

[16] The circular and uncertain mathematics of calculating a number as a percentage of an amount which includes itself is another problem with this method of calculating the performance incentive.

Because 7% of Net Benefits ($7,633,290) is a greater amount than the 14% cap (calculated in either way), it is the cap which actually determines the final amount of the performance incentive. In this example, adding the performance incentive into program costs for the purpose of calculating the cap would increase the performance incentive from $6,008,800 to $6,987,000, or by approximately $978,000.[17]

79. Staff's conclusion is that calculating the cap on performance incentives in the manner proposed by the Company would not only be incorrect, but would create an unfair burden on ratepayers. Under the APS proposal, ratepayers would be responsible for a higher performance incentive than a correct calculation would allow, and that additional cost would not arise from increases in energy efficiency, and would not benefit customers.

80. *Issue 2 Regarding Basis for Caps*. Staff also considered the question of whether incentives paid out by the utility should be included in program costs for purposes of calculating the cap on performance incentive. As noted in the Electric Energy Efficiency Standards, the Societal Test starts with the Total Resource Cost ("TRC") Test, which excludes incentives paid by affected utilities. To determine the cost of a measure, Staff typically takes into account the incremental measure costs and the program costs, exclusive of any incentives paid out by the utility. (Staff considers incentives to be a transfer payment, with the cost and the benefit being equal and cancelling one another out.) So, for purposes of calculating the benefit-cost ratio, incentives paid out by the utility would not be considered a program cost. However, since incentive costs are a necessary expense associated with implementing many energy efficiency programs, Staff believes they should not only be recoverable, but should be considered a program cost for purposes of calculating the cap on performance incentives.

81. *Staff Recommendation on Calculating the Performance Incentive*. Staff has recommended that APS' proposed methodology for calculating the cap on performance incentives not be approved. Staff has recommended that, instead, the methodology for calculating the performance incentives be approved in accordance with the Settlement Agreement, meaning that

[17] In summary: 1% of total energy resources=320,000 MWh= 7% of Net Benefits ($109,047,000)=$7,633,290 capped by 14% of program costs ($42,920,000 without performance incentive or $49,907,000 with performance incentive)=$6,008,800 or $6,987,000.

the cap on performance incentives should be based on program costs alone, without the addition of performance incentives. (Incentives paid out to customers as part of program implementation, however, should be considered program costs for purposes of calculating the cap on performance incentives.)

Demand-Side Management Adjustor Charge ("DSMAC")

82. *Recovery Through Base Rates*. APS is allowed to recover $10 million of its DSM costs through base rates each year. The proposed adjustor charges, or DSMACs, discussed below relate to DSM costs over and above those recovered through base rates.

Design and Functioning of the Adjustor

83. *Basis for DSMAC*. The Settlement Agreement proposes to change the Company's recovery of its program costs from the current historic basis to "more current recovery" of the type approved for Tucson Electric Power Company ("TEP") in Decision No. 70628. Decision No. 70628, on December 12, 2008, approved the TEP Proposed Settlement Agreement ("TEP Agreement") which set an initial funding level and adjustor rate (Section 9.2) and provided that, in ensuing years:

> "The total amount to be recovered by the DSM Adjustor mechanism *shall be calculated by projecting DSM costs for the next year. . . .*" (Section 9.5) [emphasis added]

84. *Annual Re-set*. Decision No. 70628 also provides that the amount recovered by TEP through its DSMAC would be adjusted annually by any over- or under-collections, and that performance incentives would be recovered through the DSMAC. Correspondingly, the Settlement Agreement with APS provided for the DSMAC to be reset yearly based on the same criteria.

85. The actual language of the APS Settlement Agreement with respect to the basis of recovery, the design of the adjustor mechanism and the components of the DSMAC is cited below:

> "14.6 The Signatories agree that it is reasonable for APS' DSMAC to be modified to achieve more current recovery of program costs, similar to the DSMAC approved for Tucson Electric Power Company ("TEP") in Decision No. 70628. New DSMAC rates for the upcoming year will be set by the

> Commission as part of its consideration of the Implementation Plan. The Implementation Plan shall also include a bill impact analysis. If approved, such rates would become effective with the first billing cycle in March. This will supersede existing DSMAC reset filing dates. The total amount to be recovered by the DSMAC *shall be calculated by projecting DSM costs for the next year*, adjusted by the previous year's over- or under-collection, and adding revenue to be recovered from the DSMAC performance incentive." [emphasis added]

86. *Interest*. Section 14.7 of the Settlement Agreement states that there will be no interest applied to under-recovered balances, but that APS shall apply interest to over-collected balances resulting in refunds to customers. The interest rate would be based on the one-year Nominal Treasury Constant Maturities rate in the Federal Reserve Statistical Release H-15, or its successor publication, and would be adjusted annually on the first business day of the calendar year.

87. *Recovery of Unrecovered Fixed Cost*. Section 14.8 of the Settlement Agreement provides the following:

> "APS shall not request recovery of unrecovered fixed costs ("UFC") as a component of DSM program costs until its next general rate case. APS agrees to an explicit exclusion of UFC from the definition of program costs. This provision will not preclude APS from seeking such recovery in other proceedings."

88. *APS Proposal: DSMAC 1 and 2*. In accordance with the Settlement Agreement, the DSMAC rate proposed by APS is based on projected energy efficiency spending for 2010. APS also proposes to recover its energy efficiency costs for 2009, meaning that historic 2009 costs and projected 2010 costs would be recovered at the same time, and through the same charge. To address this transition period for recovery, APS has proposed two alternative DSMAC charges. The first would recover all of its 2009 and 2010 costs during the recovery year beginning in March 2010 ("DSMAC 1"), and the second would recover all of the projected 2010 costs, but amortizes recovery of the 2009 costs over three years ("DSMAC 2").

89. *Bill Impacts, APS-Proposed Alternatives (DSMAC 1 and DSMAC 2).* The impacts, for Residential customers, based on estimated usage levels, are listed below. These impacts are estimates are for summer and winter usage, and reflect an average of all Residential customers:

Alternatives	Per kWh Charge	Estimated Winter Impact	Estimated Summer Impact
DSMAC 1 (APS Proposal)	$0.002053	$1.36	$2.05
DSMAC 2 (APS Proposal	$0.001680	$1.01	$1.52
DSMAC 1 (with Staff adjustment)	$0.002019	$1.32	$2.00
DSMAC 2 (with Staff adjustment)	$0.001646	$0.97	$1.48

90. *Staff's Analysis and Recommendations.* Staff has recommended the approval of DSMAC 2, which amortizes the 2009 energy efficiency portfolio costs over three years, with the Staff adjustment which reflects the correct method for calculating the Performance Incentive. Staff believes that the more gradual approach to recovery strikes a balance between timely recovery of the Company's costs and the need to lessen the impact on customers during a transition period when both historical and projected costs are being recovered.

91. *Outside Audit.* Given the high levels of ratepayer funding for the APS Energy Efficiency portfolio, and its complexity, Staff has recommended that an audit be performed, by an independent third party, separate from the Company's existing Measurement, Evaluation and Research portfolio component. The auditor is to be selected by Staff, in consultation with the Company. The audit will be performed at a time to be determined by Staff, and may include, but would not be limited to, the following elements:

- Verifying the correct installation of a sampling of DSM measures;
- Comparing projected and actual MWh savings required to meet the energy savings goal;
- Reviewing projected and actual net benefits;
- Comparing the performance incentive against savings achieved to confirm that the level of performance incentive corresponds with actual savings;

- Reviewing any other calculation relating to the portfolio or performance incentive;
- Reviewing the program costs for appropriateness;
- Comparing the projected and actual energy efficiency performance of program measures;
- Comparing projected and actual program participation;
- Determining whether fuel switching is taking place;
- Reviewing a sampling of documentation relating to the payment of incentives; and
- Determining whether any baselines utilized for determining energy savings should be reset due to changes in standards.

CONCLUSIONS OF LAW

1. APS is an Arizona public service corporation within the meaning of Article XV, Section 2, of the Arizona Constitution.

2. The Commission has jurisdiction over APS and over the subject matter of the application.

3. The Commission, having reviewed the application and Staff's Memorandum dated January 6, 2010, concludes that it is in the public interest to approve the APS 2010 Energy Efficiency Implementation Plan elements discussed here, with the modifications proposed by Staff.

ORDER

IT IS THEREFORE ORDERED that the proposed changes to the Consumer Products program be approved, as discussed herein.

IT IS FURTHER ORDERED that the proposed changes to the Residential Existing Homes program be approved, as discussed herein.

IT IS FURTHER ORDERED that the proposed changes to the Non-Residential New Construction program be approved, as discussed herein.

IT IS FURTHER ORDERED that the new Non-Residential Customer Repayment Financing option be approved, as discussed herein.

. . .

IT IS FURTHER ORDERED that the new budgets for any Arizona Public Service Company DSM portfolio programs or program elements approved by the Commission also be approved, as discussed herein.

IT IS FURTHER ORDERED that the proposed changes to the Performance Incentive be approved, as discussed herein.

IT IS FURTHER ORDERED that the proposed changes to the Demand-Side Management Adjustor Charge be approved, as discussed herein.

IT IS FURTHER ORDERED that an outside audit be performed at Staff's direction, as discussed herein.

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

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

CHAIRMAN COMMISSIONER

COMMISSIONER COMMISSIONER COMMISSIONER

IN WITNESS WHEREOF, I, ERNEST G. JOHNSON, Executive Director of the Arizona Corporation Commission, have hereunto, set my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this _____day of _____, 2010.

ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

DISSENT: _____

DISSENT: _____

EOA:JMK:lhm\JFW

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