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MEMORANDUM
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TO: THE COMMISSION ^{2006 JAN 17 10 34}

FROM: Utilities Division <sup>AZ CORP COMMISSION
DOCUMENT CONTROL</sup>

DATE: January 17, 2006

RE: IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR APPROVAL OF ITS DEMAND SIDE MANAGEMENT PROGRAM PORTFOLIO PLAN AND RELATED PROGRAMS. (DOCKET NO. E-01345A-05-0477)

INTERIM REPORT

This report is an interim report with Staff's initial recommendations in regards to the Non-Residential demand-side management programs ("DSM") included in the Arizona Public Service Company ("APS") Demand-Side Management Portfolio Plan and related programs ("Portfolio Plan" or "Application"). These recommendations do not necessarily reflect Staff's final recommendations regarding APS' non-residential DSM proposals.

Staff is recommending interim approval of the Non-Residential portion of the APS Application with certain program modifications and requirements discussed in Staff's Analysis and Recommendations section of this document. In response to Staff discovery on many issues, APS has indicated that it has provided all available detail to Staff. However, because these are new programs, there are still details that have not yet been established, resulting in a lack of certainty and specificity in some areas of the Application. Therefore, Staff is recommending that, within 13 months of a decision in this matter, APS should refile the Non-Residential portion of its DSM Portfolio Plan, with 12 months of actual data, for final Commission approval. At that time, the Commission will have the benefit of the results of a baseline study currently in process, 12 months of experience under each Non-Residential DSM program, and actual DSM expense data for each budget category. In addition, the Commission would have the opportunity to make any adjustments or program changes deemed necessary which could include modifications to recommendations made in this proceeding.

Staff finds that the benefits of moving forward with the Non-Residential programs at this time with a recommendation for interim approval outweigh the benefits of waiting until more information is available. In this manner, actual savings from these programs can be realized earlier. Staff estimates that the net benefits to society from these programs are \$50.4 million over the life of the measures, if the programs are in place for three years.

BACKGROUND

On July 1, 2005, APS filed an application for approval of its Portfolio Plan. The Portfolio Plan includes various DSM programs that would provide DSM opportunities for both residential and non-residential participants. The Portfolio Plan was filed in response to APS' DSM obligations provided for in Commission Decision No. 67744. APS filed revisions to its original filing on November 14, 2005, and November 21, 2005.

Under Commission Decision No. 67744, APS is obligated to spend at least \$16 million per year, or \$48 million over the initial three-year period of 2005 to 2007, on Commission-approved DSM programs and to implement and maintain a collaborative DSM working group to facilitate stakeholder input on program development and implementation. Decision No. 67744 approved a Preliminary Energy-efficiency DSM Plan. APS was to file a final plan within 120 days of the Decision. The Portfolio Plan is the final plan. Drafts of the DSM programs contained in the Portfolio Plan were discussed within the DSM collaborative group.

The Application consists of Residential and Non-Residential categories. At this time, Staff is only addressing the DSM programs comprising the Non-Residential portion of APS' DSM Application. This consists of the following six programs: Schools, Non-Residential Existing Facilities ("NR Existing"), Non-Residential New Construction and Major Renovation ("NR New"), Small Non-Residential ("NR Small"), Non-Residential Builder Operator Training ("NR BOT"), and Non-Residential Energy Information Services ("NR EIS"). The six Non-Residential programs being addressed at this time represent slightly more than half of the \$48 million APS is obligated to spend over three years. A summary of APS' overall estimated budget is provided below.

**Chart 1
APS' Overall Estimated DSM Budget
2005-2007**

Program	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Non-Residential Budget
NON-RESIDENTIAL								
Schools	\$164,000	\$25,000	\$125,000	\$1,158,000	\$183,000	\$25,000	\$1,680,000	8.1%
Existing Facilities	\$676,007	\$615,448	\$1,674,527	\$3,422,287	\$236,603	\$135,203	\$6,760,075	32.7%
New Construction & Major Renovation	\$736,007	\$670,074	\$1,823,152	\$3,726,037	\$257,603	\$147,202	\$7,360,075	35.6%
Small Non-Residential	\$435,984	\$396,928	\$1,079,972	\$2,207,175	\$152,596	\$87,196	\$4,359,851	21.1%
Builder Operator Training	\$12,000	\$9,000	\$21,000	\$0	\$192,000	\$6,000	\$240,000	1.2%
Energy Information Services	\$12,000	\$7,500	\$24,000	\$240,000	\$10,500	\$6,000	\$300,000	1.4%
Non-Residential Total	\$2,035,998	\$1,723,950	\$4,747,651	\$10,753,499	\$1,032,302	\$406,601	\$20,700,001	100.0%
Percent of Non-Residential Budget	9.8%	8.3%	22.9%	51.9%	5.0%	2.0%	100.0%	

Program	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Residential Budget
RESIDENTIAL								
Consumer Products	\$320,000	\$570,000	\$795,000	\$3,300,000	\$240,000	\$300,000	\$5,525,000	29.7%
Existing Home HVAC	\$220,000	\$394,238	\$518,498	\$1,620,000	\$293,000	\$540,000	\$3,585,736	19.3%
New Construction	\$312,513	\$873,750	\$997,000	\$3,400,000	\$306,000	\$300,000	\$6,189,263	33.3%
Low Income	\$225,000	\$15,000	\$150,000	\$2,865,000	\$30,000	\$15,000	\$3,300,000	17.7%
Residential Total	\$1,077,513	\$1,852,988	\$2,460,498	\$11,185,000	\$869,000	\$1,155,000	\$18,599,999	100.0%
Percent of Residential Budget	5.8%	10.0%	13.2%	60.1%	4.7%	6.2%	100.0%	

Program	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Total Budget
TOTAL								
Total Program Costs	\$3,113,511	\$3,576,938	\$7,208,149	\$21,938,499	\$1,901,302	\$1,561,601	\$39,300,000	81.9%
Percent of Total Budget	7.9%	9.1%	18.3%	55.8%	4.8%	4.0%	100.0%	

Total Program Costs	\$39,300,000	81.9%
Measurement, Evaluation & Research	\$3,900,000	8.1%
Performance Incentive	\$4,800,000	10.0%
TOTAL 2005-2007 DSM COST	\$48,000,000	100.0%

It should be noted that the budget details are based on estimations. APS indicated that it developed its budget allocations for its programs by reviewing DSM budget allocations from other jurisdictions and feedback from the DSM collaborative group. APS also indicated that the allocations were developed utilizing a top down approach because certain budget details are unknown at this time.

This document addresses only the Non-Residential programs listed in the top segment of Chart 1. This document does not address the residential programs, the performance incentive, or measurement evaluation and research. Other programs and budget elements not addressed here, unless previously addressed, will be evaluated at a later time. The following list outlines the order of major topics included in this document:

- General Description of Non-Residential Programs
- Cost-Benefit Analysis
- Schools Program
- Non-Residential Existing Facilities Program
- Non-Residential New Construction and Major Renovation Program
- Small Non-Residential Program
- Building Operator Training Program
- Energy Information Services Program
- Program Flexibility
- Staff's Analysis and Recommendations
- Summary of Recommendations

GENERAL DESCRIPTION OF NON-RESIDENTIAL PROGRAMS

The proposed Non-Residential programs would provide financial incentives and assistance to customers in order to encourage energy-efficient building design and the adoption of energy-efficient measures for non-residential customers. The Non-Residential programs address commercial, industrial, small business, and school facilities and include measures for new construction as well as for retrofitting existing structures.

The proposed measures included in the Non-Residential programs are generally classified as either prescriptive or custom efficiency measures. A measure refers to a single technology, such as an energy-efficient compact fluorescent lamp ("CFL") that can be used to reduce customer energy or demand requirements. The prescriptive measures are pre-defined, off-the-shelf measures that can be applied to a great number of customers. Prescriptive measures include the installation of efficient lighting fixtures; high-efficiency heating, ventilating, and air conditioning ("HVAC") systems; high-efficiency refrigeration equipment; high-efficiency motors; and building envelope measures such as cool roofs. The custom efficiency measures are designed specifically in response to a customer's individual needs and generally correspond to more complex applications not covered by the prescriptive measures. For consideration to participate in a custom efficiency measure, APS requires applicants to provide a feasibility study that estimates annual energy savings attributable to that measure in support of the incentive amount requested.

For all of the Non-Residential programs, an Implementation Contractor ("IC") would be hired to attend to the day-by-day details of program administration. The IC would be engaged in such activities as program design, administration, marketing, vendor and contractor referrals, application and incentive processing, participation tracking and reporting, and technical support.

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The IC would verify the accuracy of customer data and program eligibility status, process and review customer applications, spot check forms for errors and discrepancies, double check calculations for estimated energy and demand savings, and receive paperwork and back-up invoices to prove a measure is in place. A single IC would be selected to perform these duties for the NR Existing, NR New, and NR Small programs. APS has indicated it would most likely utilize the State of Arizona Energy Office to serve as the IC for the Schools program. APS has indicated it would use the Electric League of Arizona ("ELA") in an IC role for its NR BOT program. APS will contract with an energy information services firm to serve as IC for the NR EIS program. APS has proposed that program monitoring and evaluation tasks would be handled by a single Monitoring and Evaluation Research contractor ("MER"). The MER would be a different contractor than the IC and would handle monitoring and evaluation tasks for all Non-Residential programs. APS indicated that the MER would also engage in certain quality control checks of IC activities.

Under the Non-Residential programs, APS would also provide educational and promotional efforts aimed at facility owners and operators to inform them about the benefits of energy-efficiency equipment, improved system performance, and integrated design. These efforts would include educational brochures, program promotional material, and website content. In addition, APS proposes to train contractors to provide quality installation of energy-efficient equipment and to maintain a list of commercial qualified contractors. Only those contractors that meet professional standards and complete APS' Commercial Qualified Contractor training requirements for installation and operation of high-efficiency systems would be included on the list. APS would refer contractors on this list to program participants wishing to have energy-efficient equipment installed.

The Commercial Qualified Contractor training would be provided by APS through the Electric League of Arizona ("ELA"). The training would be offered two times a year with APS providing an incentive of 50 percent of the cost of the training and the contractor paying the balance of the cost. The training program has not been developed yet, but would be modeled after the ELA's existing Residential Qualified Contractor Program. APS anticipates the training would consist of 12 courses, each consisting of three evenings of three hours of instruction, for a total of 108 hours of instruction. The ELA would provide the instructors, and the course materials would begin with existing ELA residential and small commercial materials with additional materials to be developed. Contractors would not be formally certified, but would be added to a referral list based upon successful completion of the course and meeting the professional standards of being in good standing with the Better Business Bureau and the Arizona Registrar of Contractors. APS has indicated that it is monitoring the development of a national EPS/DOE Energy Star certification standard for quality installation practices for possible use in the future.

APS would include information on each Non-Residential program in its semi-annual reports required by Commission Decision No. 67744.

In response to Staff inquiries concerning the origin and assembly plant locations for various energy-efficiency equipment, APS provided numerous articles and website content

discussing the matter. Staff reviewed these documents and generally concluded that both the conventional equipment and the energy-efficient alternatives are produced by multi-national corporations with facilities in many different countries, including the United States. The equipment is assembled with parts which are also produced in a wide array of countries.

COST-BENEFIT ANALYSIS

The Commission's 1991 Resource Planning Decision No. 57589 established that the Societal Cost Test should be used for the purposes of establishing whether a DSM program can be considered cost-effective. For each type of measure proposed by APS, the Company conducted a cost-benefit analysis utilizing the Societal Cost Test. Staff completed its own analysis of the costs and benefits also based on the Societal Cost Test.

Under the Societal Cost Test, the incremental benefits of a program to society must exceed the incremental cost of having the program in place in order for the program to be cost-effective. Societal costs include the customer's cost for installing the more energy-efficient measures and APS' costs for delivering the DSM program, excluding incentives. Societal benefits include APS' deferred generation capacity costs and avoided energy costs. Other benefits of a program include reduced water consumption and air pollution, although dollar values have not been assigned to those benefits.

It should be noted, however, that a cost benefit analysis such as the Societal Cost Test is based upon many assumptions and data from various sources. The end result of such an analysis can be no more accurate than the assumptions and data that have been utilized and is merely an estimation. APS is currently conducting a baseline study that is estimated to be completed sometime in February 2006¹. This baseline study will provide a basis for developing, supporting, and evaluating DSM programs. The study will also provide an analysis of load shapes by market segment, current efficiency levels by customer market segment, and local pricing information for conventional and energy-efficient measures.

Absent current baseline data, APS utilized data from various sources including, but not limited to, information from other states including California, APS' End Use Data Acquisition Project Study², and the U.S. Department of Energy for its energy savings per unit, incremental cost, and measure life analysis.

The inputs Staff utilized in its cost-benefit analysis include avoided capacity costs from the U.S. Energy Information Administration, hourly avoided energy costs generated by Staff's UPLAN production costing model, APS incremental costs, APS' estimates of measure life, and APS' estimate of demand and energy savings per unit adjusted for line losses. Staff calculated the total demand savings for each program by multiplying the demand savings per unit by the coincidence factor³ times the number of units expected to be part of the program. Staff calculated the total energy savings for each program by multiplying the kWh savings per unit of

¹ Approved in Commission Decision No. 67816 on May 5, 2005.

² 1997 study that investigated the end-use characteristics of APS non-residential market.

³ The likelihood that the measure is used at the time of the utility's system peak demand.

measure times the number of units times the measure life and summing the results of all measures in a program.

Staff estimates that the Non-Residential programs for three years could result in about \$50.4 million of net benefits to society over the lifetime of the measures. In addition, Staff estimates that the Non-Residential programs could reduce APS' annual peak demand by about 32.0 MW ("megawatts") and energy consumption by about 3.3 million MWh ("megawatt-hours") over the life of the measures. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 2
Non-Residential DSM
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget ¹	Total Societal Costs ²	Total Societal Benefits ³	Net Societal Benefits ⁴
Schools	\$1,680,000	\$1,962,186	\$2,351,398	\$389,212
Existing Facilities	\$6,760,075	\$16,610,136	\$37,430,032	\$20,819,896
New Construction & Major Renovation	\$7,360,075	\$14,945,504	\$29,160,752	\$14,215,247
Small	\$4,359,851	\$11,648,613	\$24,861,293	\$13,212,680
Builder Operator Training	\$240,000	\$864,675	\$1,912,281	\$1,047,606
Energy Information Services	\$300,000	\$354,000	\$1,047,820	\$693,820
Total	\$20,700,001	\$46,385,114	\$96,763,576	\$50,378,462
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

SCHOOLS PROGRAM

Program Concept

The Schools Program is proposed to reduce energy consumption in public school buildings including charter schools. The Schools Program would emphasize lighting upgrades, energy education, building operator training, and design assistance. All cost-effective energy-efficiency proposals would be considered by APS; however, APS believes that lighting upgrades may offer the best opportunity to conserve energy in public schools. APS indicated that it reached this conclusion after conferring with the Arizona Department of Commerce Energy Office ("Energy Office") and the Arizona Association of School Business Officials ("AASBO").

APS estimates that there are 1,400 public school sites and 280 charter school sites in its service area. Although APS did not provide a baseline study, it estimates that 40 percent of schools' electricity usage is for lighting and that 60 percent of existing lights in schools could be economically upgraded to be more energy-efficient.

The Schools Program is unique in that a fixed amount of money, set at \$1,680,000 over three years, is reserved exclusively for schools. Under APS' proposal, once these funds are depleted for a budget year, schools may participate in any other approved non-residential DSM programs for which a school would qualify. However, Staff is concerned that schools should not be required to utilize all of the school funding prior to being able to participate in other DSM programs. Staff sees no reason to limit schools from participating in other DSM programs before the Schools Program funding is expended. Staff anticipates that larger schools may choose to participate in other programs, such as the NR Existing and the NR New Programs, leaving more money in the Schools Program budget for smaller districts and charter schools. This would allow schools to take advantage of higher funding limits outside the schools program to undertake larger DSM projects. Therefore, Staff is recommending that schools be allowed to participate in any other non-residential DSM Program at any time, either before or after reaching the budget cap.

The degree of participation by schools in the Schools Program and other DSM programs would not be known until APS has had some experience with the programs. Staff is recommending that APS provide information about the level of school participation in all DSM programs in the 13-month filing that is being recommended by Staff.

Program Products and Services

DSM measures applicable to the Schools Program:

Lighting Measures

- Replace existing T12 lighting and magnetic ballasts with T8 fluorescents and electronic ballasts
- All additional lighting measures available under other non-residential programs

All Other Measures

- Measures from other Non-Residential programs are also available to the Schools Program including: HVAC, Refrigeration, Motors, Building Envelope, Custom Efficiency, and Design Assistance

A list of measures by program is provided in Exhibit 1 at the end of this document.

APS is proposing to employ an IC to assist them with the administration of some aspects of the Schools Program. APS has indicated to Staff that it will contract with the Energy Office to serve in this capacity. APS and its IC will work with the AASBO, the School Facilities Board, and the Arizona State Board for Charter Schools to pro-actively identify schools that are considering projects that might qualify for assistance under this program. The assistance would

include helping schools submit an application for funding, assessing the school property to determine the most viable energy-efficiency proposal, identifying and recommending capable contractors, and assisting in managing the design and implementation of the projects, as needed.

In addition to providing financial incentives for lighting upgrades and other cost-effective prescriptive measures, APS would provide educational and training materials to relevant school personnel to make them aware of energy-efficiency issues. APS would also provide direct training to school building operators and provide assistance to schools in identifying energy-saving opportunities.

APS states in response to Staff's discovery that the program monitoring and evaluation tasks will be performed by both the IC and the MER. The IC would perform routine invoice verification and related duties where the MER would be involved with energy usage benchmarking, measuring energy savings, and quality control activities in overseeing the work of the IC. The IC would authorize payment of incentives under the Schools Program upon completion of each energy-efficiency project. Before such payment is made, the IC will perform verification by checking all energy project-related invoices and verifying a representative sample of completed projects to ensure that the energy-efficient equipment and systems were installed. Field verification involving physical site inspection would be utilized for all larger custom efficiency projects. APS has indicated in response to Staff discovery that it will rely on feedback from the IC to define what constitutes a "larger" custom efficiency project.

APS' has proposed maximum limits for incentives of \$15/student per year or \$25,000 per school district per year, whichever is less. However, APS has also requested approval to provide funding in excess of the limits if there are insufficient applications to use all the available funds in a given budget year. Staff has concerns because the details of the manner in which an override of the Schools program cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC, which will not be hired until after this item is approved. Until the details of the manner in which the override would be administered can be provided and Staff is able to review customer participation levels in each program, Staff cannot recommend approval of APS' proposal to override the Schools program cap. Therefore, at this time, Staff is recommending that the incentive cap for all measures paid under the Schools program be set at \$15/student per year or \$25,000 per school district per year, whichever is less. Staff is also recommending that if, in the future, APS would like to provide for an override of the Schools Program incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

Staff has some concern about APS' plan to award funding to schools on a first-come, first-served basis, even though APS has indicated this policy was developed in collaboration with school representatives. Staff is concerned that the smaller districts and charter schools which do not have dedicated energy staffs may not be able to react as quickly as the larger districts. APS' proposed limits of \$15/student per year or \$25,000 per school district per year, whichever is less, should mitigate this problem somewhat by assuring that a small number of large districts will not use up all of the funds. In addition, Staff anticipates that its recommendation to allow schools to participate in other non-residential DSM programs, either before or after reaching the cap, would

free up more funding for smaller school districts and charter schools will also help mitigate the problem. However, without experience under the program, Staff is unable to make such a determination. Therefore, Staff is recommending that APS track the use of Schools Program funds by size of school entity and report such findings in its semi-annual DSM reports as well as in the 13-month filing recommended by Staff.

Budget and Societal Benefits

The budget for the Schools Program includes categories for planning and administration, marketing, implementation, rebates and incentives, training and technical assistance, and consumer education. For the first three years of the program, the budget is \$1,680,000 allocated as follows:

**Chart 3
APS' Schools Program Estimated Budget
2005-2007**

Year	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$40,000	\$7,000	\$13,000	\$338,000	\$50,000	\$7,000	\$455,000
2006	\$62,000	\$8,000	\$56,000	\$365,000	\$61,000	\$8,000	\$560,000
2007	\$62,000	\$10,000	\$56,000	\$455,000	\$72,000	\$10,000	\$665,000
Total	\$164,000	\$25,000	\$125,000	\$1,158,000	\$183,000	\$25,000	\$1,680,000
Percent of Budget	9.8%	1.5%	7.4%	68.9%	10.9%	1.5%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff finds no reason to disagree with APS' initial allocation for funding the Schools Program based upon the information provided by APS. However, Staff is recommending that APS continually assess opportunities to increase funding levels for schools based on feedback

from the DSM collaborative, school representatives and officials, and the results of overall program performance. APS should provide information about its efforts to increase funding for schools in APS' semi-annual reports and the 13-month filing that is being recommended by Staff. At that time, APS will have 12 months of experience under the Schools Program and, based on program performance, the funding level for schools can be reassessed at that time.

APS based its analysis of program costs and benefits as well as energy and peak load savings solely upon the T8 Lighting retrofit component of the Schools Program. Results of Staff's analysis confirm APS' conclusion that this is a cost-effective program.

According to Staff's analysis of the program for the first three years, the Schools Program lighting component alone could provide about \$389,000 in net benefits over the life of the measures and could reduce annual peak demand by about 304 MW and energy consumption by about 85,000 MWh over the life of the measures. To the extent that other cost-effective measures would be undertaken by schools in the Schools Program, additional savings could accrue. Staff's analysis of the benefits of the Schools Program is based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 4
Non-Residential Schools Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget ¹	Total Societal Costs ²	Total Societal Benefits ³	Net Societal Benefits ⁴
Schools	\$1,680,000	\$1,962,186	\$2,351,398	\$389,212
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

NON-RESIDENTIAL EXISTING FACILITIES PROGRAM

Program Concept

The NR Existing Program is designed to provide opportunities for energy savings in this sector of higher energy use customers. The NR Existing Program would provide incentives to qualifying owners and operators of existing large non-residential facilities for energy-efficiency improvements in lighting, HVAC, motors, and refrigeration applications. Under the program, APS would provide incentives to qualifying customers who adopt custom efficiency or prescriptive measures through the retrofit or replacement of equipment.

The NR Existing Program would be available for APS non-residential customer facilities having a monthly peak demand greater than 200 kW based on the past 12 months of billing

history. This category would typically include existing large offices, large retail establishments, large groceries, resorts and large hotels, colleges and universities, and inpatient healthcare facilities.

Under the program, APS would also provide incentives for retro-commissioning⁴ studies that use a systematic process to improve and optimize existing building operations. The NR Existing Program also proposes to increase the energy efficiency of large central HVAC systems through diagnosis, tune-up, and other initiatives recommended by the retro-commissioning study. The program would also provide educational and training materials to aid building and facility owners and operators in making decisions to improve the energy efficiency of their facilities. APS proposes to train, qualify, and promote the use of contractors that have met professional standards and completed APS' Commercial Qualified Contractor training for installation and operation of high-efficiency systems. The NR Existing Program also includes custom efficiency incentives to implement energy-efficiency measures not covered by the prescriptive measures.

Program Products and Services

Specific DSM measures proposed for the NR Existing Program:

Lighting Measures

- Replace less efficient fluorescent lighting and magnetic ballasts with energy-efficient T8 & T5 systems and electronic ballasts
- Replace less efficient incandescent lamps with energy-efficient CFLs
- Replace existing exit signs with energy-efficient LED exit signs
- Install daylighting controls and occupancy sensors
- Delamping – remove unneeded lighting fixtures or bulbs
- Replace outdoor lighting with high-efficiency sodium vapor fixtures

HVAC Measures

- Install energy-efficient air-cooled air conditioning units (packaged cooling)
- Install energy-efficient air-cooled chillers or water-cooled chillers
- Perform HVAC diagnostics, tune-up system, and repair any deficiencies found
- Provide for quality installation of HVAC equipment by referring a qualified contractor

Refrigeration Measures

- Replace existing refrigerators, freezers, and ice makers with high-efficiency units
- Replace refrigeration fan motors with high-efficiency evaporative units
- Add reach-in cooler controls, beverage case controls, and snack machine controls
- Install anti-sweat heater controls

⁴ Retro-commissioning refers to applying a systematic investigation process for optimizing a building's operations and maintenance. The intent is to optimize how equipment and systems operate individually and function together through diagnostic testing and tune-up activities.

- Install strip curtains and night covers

Motor Measures

- Install energy-efficient motors – 1 to 200 h.p.
- Install variable speed drives

Building Envelope Measures

- Cool roof applications to increase reflectivity

Custom Efficiency Measures

- Custom measures designed to exploit savings opportunities of specific customers

APS also proposes to undertake educational and promotional efforts to make facility and business owners and operators aware of the benefits offered by this program. These initiatives would include educational brochures, program promotional materials, and specific website content. The measures include both prescriptive measures, which carry prescribed incentives as listed in Exhibit 1 at the end of this document, and custom efficiency measures for which incentives are paid based upon estimated kWh savings attributable to the measure.

The custom efficiency measures lie outside the prescriptive measure definitions and are individually tailored by building owners and managers to take advantage of energy efficiencies specific to their building or facility. Incentives for these measures are paid one time only for estimated kWh energy savings at the rate of \$0.11 per annual kWh saved. The incentive is limited to 50 percent of the custom energy-efficiency measure's incremental cost. Each project is required to include a feasibility study that identifies the energy conservation measures and calculates estimated annual energy savings. The custom efficiency feasibility study must take the form of an energy simulation or analysis and requires review and approval from APS' IC in order to be eligible for an incentive. An additional incentive of up to 50 percent of the cost of the custom efficiency feasibility study would be available to assist the customer with the cost of performing the study, limited to a maximum incentive of \$10,000 for the study.

Incentives would also be provided for retro-commissioning studies covering up to 50 percent of the cost of the study, limited to a maximum incentive of \$10,000. Incentives for implementing custom efficiency measures identified by the retro-commissioning study would be paid based upon \$0.11/kWh saved annually.

APS is proposing to utilize an IC to administer many aspects of the NR Existing Program. The IC would be tasked to provide details of program design, administration, marketing, vendor and retro-commissioning contractor referrals, application and incentive processing, participation tracking and reporting, quality control, and technical support. The same IC employed to handle these tasks in the NR Existing Program would also be utilized in the NR New and NR Small programs. APS has indicated that it would hire the IC after Commission approval of this item.

APS states that the program monitoring and evaluation tasks will be performed by both the IC and the MER. The IC will perform routine invoice verification and related duties where the MER will be involved with energy usage benchmarking, measuring energy savings, and quality control activities in overseeing the work of the IC. One strategy for monitoring and evaluation of the NR Existing Program would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. APS states that this technique involves the MER earlier and results in more timely and accurate data at a lower cost.

Incentives in the NR Existing Program would only be paid after completion of the project(s) and verification has occurred. Verification involves checking invoices and the identification of a representative sample of measures that would be checked by the IC to determine if energy-efficiency measures have been installed. Field verification, involving physical site inspection, would be utilized for all larger custom efficiency projects. APS has indicated in response to Staff discovery that it will rely on feedback from the implementation contractor to define what constitutes a "larger" custom efficiency project.

Under APS' proposal, the DSM total incentive for all prescriptive and custom measures undertaken by a single customer⁵ would be capped at \$300,000 per customer per budget year. However, APS has requested to allow additional measures and to pay additional incentives over the cap to a customer if there are insufficient applications from other customers to use the funds budgeted for the NR Existing Program. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC, which will not be hired until after this item is approved. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR Existing program. Therefore, at this time, Staff is recommending that the incentive cap for all measures paid to any customer under the NR Existing Program be set at \$300,000 per budget year. Staff is also recommending that if in the future APS would like to provide for an override of the NR Existing incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

APS has included the possibility of third-party financing assistance as a future component of its NR Existing Program. APS has proposed to use DSM funds to defray the costs associated with this option. The purpose of such a program component would be to assist some municipal and local government agencies that lack capital to invest in energy-efficiency improvements. Until more details of this component of the program are developed and approved, Staff is recommending exclusion of third-party financing assistance from the NR Existing Program.

Budget and Societal Benefits

The budget for the NR Existing Program includes categories for planning and administration, implementation, incentives, consumer education, training and technical

⁵ "Customer" is defined by APS in this context as one or more sites, locations, or accounts controlled by a single decision maker. Normally, one "customer" will be comprised of those sites, locations, or accounts for which the electric bills are paid by a single entity.

assistance, and marketing. For the first three years of the program, the budget is allocated as follows:

Chart 5
APS' Existing Facilities Estimated Budget
2005-2007

Year	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$183,085	\$173,931	\$549,256	\$823,884	\$64,080	\$36,618	\$1,830,854
2006	\$225,336	\$214,069	\$563,340	\$1,126,679	\$78,868	\$45,067	\$2,253,359
2007	\$267,586	\$227,448	\$561,931	\$1,471,724	\$93,655	\$53,518	\$2,675,862
Total	\$676,007	\$615,448	\$1,674,527	\$3,422,287	\$236,603	\$135,203	\$6,760,075
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR Existing Program could provide an opportunity for significant savings of energy and demand by making incentives available to install energy-efficiency measures that may not otherwise be considered. According to Staff's analysis of the program for three years, the energy-efficiency measures expected to result from the NR Existing Program could provide about \$20.8 million in net benefits over the life of the measures. In addition, the NR Existing Program could reduce annual peak demand by about 10 MW and energy consumption by about 844,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR Existing Program is based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 6
Non-Residential Existing Facilities Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget¹	Total Societal Costs²	Total Societal Benefits³	Net Societal Benefits⁴
Existing Facilities	\$6,760,075	\$16,610,136	\$37,430,032	\$20,819,896
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

NON-RESIDENTIAL NEW CONSTRUCTION AND MAJOR RENOVATION PROGRAM

Program Concept

The NR New Program emphasizes integrated energy-efficient design and equipment selection early in the design process to improve the energy efficiency of non-residential new construction projects and major renovations. This program offers monetary incentives as well as design assistance and consultation to customers planning new non-residential facilities or major renovations. It relies heavily upon the custom efficiency measures, but also includes prescriptive measures for the installation of energy-efficient equipment for lighting, HVAC, motors, and refrigeration. Under the program, APS would provide incentives to qualifying customers who adopt integrated design efficiency measures through the specification of energy-efficient features and equipment.

The NR New Program is available for APS non-residential customers constructing facilities estimated to have a maximum monthly peak demand greater than 200 kW or customers planning major renovation projects of existing structures having a maximum monthly peak demand of 200 kW or more based on the past 12 months of billing history. This category would typically include large offices, large retail establishments, large groceries, resorts and large hotels, colleges and universities, and inpatient healthcare facilities.

The NR New Program relies heavily upon providing design incentives to cover the incremental resources involved to assess alternative design options that would improve the energy efficiency of the project through design assistance. According to APS, time and budget constraints on the design team are a significant market barrier to the design and construction of high-efficiency buildings. After enhanced design features have been identified, the NR New Program offers both prescriptive incentives for specific energy-efficiency measures and custom efficiency incentives for projects reaching beyond the standard prescriptive measures. It should be noted that a considerable amount of time can elapse between the design of a building and when the energy savings will actually be realized.

Program Products and Services

Specific DSM measures proposed for the NR New Program:

Design Assistance:

- Promote integrated design and integrated analysis of alternative high-efficiency design packages
- Assist the design team in examining alternative high-efficiency design packages through the provision of the design incentive

Common Measures:

- Train and qualify commercial contractors to meet APS' standards for installation and operation of high-efficiency systems

Custom Efficiency Measures:

- Encourage facility-specific efficiency features through custom incentives that are otherwise difficult to cover in a prescriptive program.
- Encourage the integrated system approach to incorporating energy-efficient improvements in new construction and major renovation projects.

Prescriptive Measures:

Lighting Measures

- Install fluorescent lighting with energy-efficient T8 & T5 systems and electronic ballasts
- Install energy-efficient CFLs
- Install energy-efficient LED exit signs
- Install daylighting controls and occupancy sensors
- Install outdoor lighting with high-efficiency sodium vapor fixtures

HVAC Measures

- Install energy-efficient, air-cooled air conditioning units (packaged cooling)
- Install energy-efficient, air-cooled chillers or water-cooled chillers
- Provide for quality installation of HVAC equipment by referring a qualified contractor

Refrigeration Measures

- Install high-efficiency refrigerators, freezers, and ice maker units
- Install refrigeration fan motors with high-efficiency evaporative units
- Add reach-in cooler controls, beverage case controls, and snack machine controls
- Install anti-sweat heater controls

- Install strip curtains and night covers

Motor Measures

- Install energy-efficient motors – 1.5 to 200 h.p.
- Install variable speed drives

Building Envelope Measures

- Cool roof applications to increase reflectivity

Under the Design Assistance measure provided in the NR New Program, APS would provide design incentives to cover APS consultation with the design team to include modeling of integrated design packages using building energy simulation models. APS would offer customers participating in the design assistance program an incentive covering up to 50 percent of incremental design costs. In addition, APS would provide incentives for commissioning studies. A commissioning study employs a systematic process to optimize a new building's operations and to ensure that the new building operates and performs as intended by the designer. Incentives for commissioning studies would cover up to 50 percent of the cost of the study with a limit of \$10,000 per study. The incentive for implementing commissioning study recommendations is based on a one-time payout on the estimated annual energy savings of the installed custom efficiency measures equal to \$0.11 per annual kWh saved.

The custom efficiency features of the NR New Program would provide for feasibility studies for more complex applications and a process for estimating proposed savings. The program features also include exploration and consideration of emerging energy-efficiency technologies already being utilized commercially in the marketplace.

The custom efficiency measures lie outside the prescriptive definition and are individually tailored by building owners and managers to take advantage of energy efficiencies specific to their project or facility. Incentives for these measures are paid one time only for estimated kWh energy savings at the rate of \$0.11 per annual kWh saved. The incentive is limited to 50 percent of the custom energy-efficiency measure's incremental cost. Each project is required to include a feasibility study that identifies the energy conservation measures and calculates estimated annual energy savings. This study must be an energy simulation or analysis and requires approval from APS or its IC. An incentive of up to 50 percent of the cost of the feasibility study is also available with a maximum incentive limit of \$10,000 for the custom efficiency study.

APS proposes to undertake educational and promotional efforts to assist facility and business owners and operators in making decisions to improve the energy efficiency of their project facilities. These efforts would consist of educational brochures, program promotional materials, and website content. As in the NR Existing Program, this program also proposes to qualify and refer contractors that have completed APS' Commercial Qualified Contractor training for installation and initial operation of high-efficiency systems.

The DSM total incentive for all prescriptive and custom measures undertaken by a single customer is capped at \$300,000 per customer per budget year. However, APS proposes to allow additional measures and to pay additional incentives over the cap if there are insufficient applications from other customers to use the funds budgeted for the NR New Program. APS has indicated that this provision would be implemented based on feedback from the IC and more details would be available after the IC is hired. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR New program. Therefore, at this time, Staff is recommending that the incentive cap for all measures paid to any customer under the NR New Program be set at \$300,000 per budget year. Staff also is recommending that if in the future APS would like to provide for an override of the NR New incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

APS is proposing to utilize an IC to administer many aspects of the NR New Program. These would include most day-to-day activities of the program including providing details of program design, program marketing, verifying customer eligibility, accepting applications from customers to participate, assisting with and verifying design studies and custom efficiency studies, vendor referrals, working with the MER to verify measures, technical support, record keeping, and incentive processing and payment. APS has indicated that the IC will be selected after Commission approval of the NR New Program using an RFP process. APS has already received bids from various contractors to serve as the IC.

APS states that the program monitoring and evaluation tasks will be performed by both the IC and the MER. The IC will perform routine invoice verification and related duties where the MER will be involved with energy usage benchmarking, measuring energy savings, and quality control activities in overseeing the work of the IC. One strategy for monitoring and evaluation of the NR New Program would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. APS has indicated that this technique involves the MER early in the process and results in more timely and accurate data at a lower cost. For example, energy-efficient design features of each project would be documented by the MER during the planning and design stages of the project.

Incentives in the NR New Program would only be paid after completion of the project(s) and verification has occurred. Verification involves checking invoices and the identification of a representative sample of measures that would be checked by the IC to determine if energy-efficiency measures have been installed. Field verification involving physical site inspection would be utilized for all larger custom efficiency projects. APS has indicated in response to Staff discovery that it will rely on feedback from the implementation contractor to define what constitutes a "larger" custom efficiency project.

Budget and Societal Benefits

The budget for the NR New Program includes planning and administration, implementation, incentives, consumer education, training and technical assistance, and marketing. For the first three years of the program, the budget is allocated as follows:

**Chart 7
APS' New Construction and Major Renovation Estimated Budget
2005-2007**

Year	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$199,335	\$189,369	\$598,006	\$897,009	\$69,767	\$39,868	\$1,993,354
2006	\$245,336	\$233,069	\$613,340	\$1,226,679	\$85,868	\$49,067	\$2,453,359
2007	\$291,336	\$247,636	\$611,806	\$1,602,349	\$101,968	\$58,267	\$2,913,362
Total	\$736,007	\$670,074	\$1,823,152	\$3,726,037	\$257,603	\$147,202	\$7,360,075
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR New Program could create an opportunity for significant savings of energy and demand by making incentives available to explore design features that may not otherwise be considered. The prescriptive measures could also create substantial savings for this class of customers by promoting the installation of energy-efficient equipment in new or renovated buildings. According to Staff's analysis of the program for three years, the energy-efficiency measures expected to result from the NR New Program could provide about \$14.2 million in net benefits over the life of the measures. In addition, the NR New Program could reduce annual peak demand by about 8.6 MW and energy consumption by about 719,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR New Program is

based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 8
Non-Residential New Construction & Major Renovation Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget ¹	Total Societal Costs ²	Total Societal Benefits ³	Net Societal Benefits ⁴
New Construction & Major Renovation	\$7,360,075	\$14,945,504	\$29,160,752	\$14,215,247
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

SMALL NON-RESIDENTIAL PROGRAM

Program Concept

The proposed NR Small Program is designed to increase energy efficiency of customers' facilities within the small non-residential customer segment. Under the NR Small Program, APS would provide prescriptive incentives to small non-residential customers for energy-efficiency improvements in lighting, HVAC, motors, and refrigeration applications. One program goal is to facilitate customer participation by making participation trouble-free for the NR Small customer. Toward that end, APS proposes to provide a one-source audit and installation referral service.

The NR Small Program would be available for APS' non-residential customers with a maximum monthly peak demand of 200 kW or less based on the past 12 months of billing history. This category would typically include restaurants, primary and secondary schools, small offices, small retail establishments, hotels, and outpatient healthcare facilities.

This program would promote a systems approach to improving the efficiency of small commercial HVAC systems by promoting (1) proper sizing of new air conditioning equipment, (2) staged air conditioning equipment, and (3) systems diagnostics and improvements that include air balancing, proper refrigerant charging, and duct sealing. The program also focuses on high-efficiency lighting, motors, and refrigeration systems. It proposes to further promote the whole system approach by cross-training, identifying, and referring energy-efficiency trained and qualified HVAC and lighting contractors.

Program Products and Services

Specific DSM measures proposed for the NR Small Program:

Lighting Measures

- Replace less efficient fluorescent lighting and magnetic ballasts with energy-efficient T8 & T5 systems and electronic ballasts
- Replace less efficient incandescent lamps with energy-efficient CFLs
- Replace existing exit signs with energy-efficient LED exit signs
- Install daylighting controls and occupancy sensors
- Delamping – removal of unneeded lighting fixtures or bulbs
- Replace outdoor lighting with high-efficiency sodium vapor fixtures

HVAC Measures

- Install energy-efficient, air-cooled air conditioning units (packaged cooling)
- Install energy-efficient, air-cooled chillers or water-cooled chillers
- Perform HVAC diagnostics, tune-up system, and repair any deficiencies found
- Provide for quality installation of HVAC equipment by referring a qualified contractor

Refrigeration Measures

- Replace existing refrigerators, freezers, and ice makers with high-efficiency units
- Replace refrigeration fan motors with high-efficiency evaporative units
- Add reach-in cooler controls, beverage case controls, and snack machine controls
- Install anti-sweat heater controls
- Install strip curtains and night covers

Motor Measures

- Install energy-efficient motors – 1 to 200 h.p.
- Install variable speed drives

APS proposes to undertake educational and promotional efforts through its IC to assist facility and business owners and operators in making decisions to improve the energy efficiency of their facilities. These efforts are designed to increase the awareness and knowledge of the commercial building ownership and the management community on the benefits of efficiency measures. Promotional efforts would include educational brochures, program promotional material, bill stuffers, media ads, and website content.

The NR Small program also proposes to train, qualify, and promote contractors that meet APS' standards for installation and operation of high-efficiency systems through their Commercial Qualified Contractor Program. This program is directed at increasing the availability of trained and qualified contractors and service technicians who can provide whole facility integrated energy-efficiency solutions including the systems approach to HVAC, state-of-the-art testing and diagnostic techniques, and the performance impacts of system problems such as leaking ductwork.

APS states that the program monitoring and evaluation tasks will be performed by both the IC and the MER. The IC will perform routine invoice verification and related duties where

the MER will be involved with energy usage benchmarking, measuring energy savings, and quality control activities in overseeing the work of the IC. Monitoring and evaluation would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. APS states that this technique involves the MER earlier and results in more timely and accurate data at a lower cost. The IC would examine invoices to verify some installations and would rely upon installation vendors to observe completed installations at the field site and to report such observations to verify other measures. Incentives under the NR Small Program would be paid only after completion of the energy-efficiency project has been verified.

Under APS' proposal, the total DSM incentive for all measures undertaken by a single customer would be capped at \$150,000 per customer per budget year. However, APS has requested to allow additional measures and to pay additional incentives over the cap to a customer if there are insufficient applications from other customers to use the funds budgeted for the NR Small Program. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC, which will not be hired until after this item is approved. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR Small program. Therefore, at this time, Staff is recommending that the incentive cap for all measures paid to any customer under the NR Small program be set at \$150,000 per budget year. Staff is also recommending that if, in the future, APS would like to provide for an override of the NR Small cap, it should provide such details in the 13-month filing that is being recommended by Staff.

APS has included the possibility of third-party financing assistance as a future component of its NR Small Program. APS proposes to use DSM funds to defray the costs associated with this option. The purpose of such a program component would be to assist some small business owners who lack the capital to invest in efficiency upgrades or choose to invest this capital in business-related purchases over energy-efficiency upgrades. Until more details of this component of the program are provided and approved, Staff is recommending exclusion of third-party financing assistance from the NR Small Program.

Budget and Societal Benefits

The budget for the NR Small Program includes categories for planning and administration, implementation, incentives, consumer education, training and technical assistance, and marketing. For the first three years of the program, the budget is allocated as follows:

Chart 9
APS' Small Non-Residential Program Estimated Budget
2005-2007

Year	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$118,079	\$112,175	\$354,238	\$531,357	\$41,328	\$23,615	\$1,180,792
2006	\$145,328	\$138,062	\$363,321	\$726,642	\$50,865	\$29,066	\$1,453,284
2007	\$172,577	\$146,691	\$362,413	\$949,176	\$60,403	\$34,515	\$1,725,775
Total	\$435,984	\$396,928	\$1,079,972	\$2,207,175	\$152,596	\$87,196	\$4,359,851
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR Small Program could create opportunities for savings of energy and demand by providing incentives for building owners and managers to adopt conservation measures. According to Staff's analysis of the program for three years, the NR Small Program could result in about \$13.2 million in net benefits over the life of the measures. In addition, the NR Small Program could reduce annual peak demand by about 12.3 MW and energy consumption by about 1,501,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR Small Program is based upon many assumptions and data from various sources and is only an estimation.

Chart 10
Non-Residential Small Non-Residential Program
Net Societal Benefits
(Staff's Three-year Estimate)

DSM Program	APS Estimated Budget¹	Total Societal Costs²	Total Societal Benefits³	Net Societal Benefits⁴
Small	\$4,359,851	\$11,648,613	\$24,861,293	\$13,212,680
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

BUILDING OPERATOR TRAINING PROGRAM

Program Concept

The NR BOT Program would provide subsidized training for building operators and facility maintenance technicians on energy-efficient building operations and maintenance practices. All commercial, industrial, and institutional building operators and maintenance technicians located in APS' service territory would be eligible for the NR BOT Program. The program is intended to help building operators and facility maintenance personnel better understand how their facilities use energy and how to better manage energy costs. APS states that participants would also learn how to gain efficiency by purchasing energy-efficient equipment, keeping such equipment maintained, and operating it correctly.

APS proposes to provide the training through a cooperative effort with the ELA. The ELA would provide the actual training and administer all program implementation which includes course scheduling, registration, payment, and other administration. The course would be offered at least twice per year. Each course would last eight weeks and consist of eight hours of training per week. The training and curricula would be delivered by industry experts from trade partners including ELA trainers.

It should be noted that this training is currently being offered by the ELA and that APS is currently supporting it by providing funding to the ELA on an annual basis. This program would continue APS' promotion of the training, but change the manner in which APS provides financial support to the ELA program. Under the NR BOT Program, APS would provide a portion of the program participants' tuition instead of direct funding to the ELA on an annual basis.

Program Products and Services

APS proposes to offer separate training classes for building operators and managers, and for building maintenance technicians. The training for building operators and managers would include instruction on operations and maintenance practices regarding HVAC, lighting, electrical

systems, and energy conservation. Building maintenance technician training would cover airflow control, refrigeration, electrical systems, and variable frequency drives. Training materials would include HVAC and electrical texts as well as Arizona Industries of the Future, Inc. CD software, course handouts, APS energy-efficient fact sheets, website links, and information on supplemental training seminars.

Courses would include selections from the ELA's Institute for Facility Management Education program offerings of educational programs that are designed for a wide range of facility management personnel including building operators, maintenance technicians, and managers of multi-facility complexes. According to APS, the curricula have been developed by industry practitioners, APS staff members and instructors, and educational committee members of the ELA and Arizona Heat Pump Council. The content of the courses is designed to promote operation and maintenance practices that would increase energy efficiency of commercial and industrial facilities. It would cover general utility rate concepts, preventative maintenance, how to perform an energy audit, how to create reports for management to justify energy-efficiency expenditures, and how to improve equipment-purchasing skills. The classes would also provide an opportunity to refer class participants to other APS DSM programs. APS has indicated that instructors at the ELA Institute for Facility Management Education include professional building energy managers of large facilities and trainers with an average of more than 25 years of experience.

APS would provide marketing and promotional efforts to make the NR BOT Program known to eligible participants. APS would utilize printed promotional materials, brochures, newsletters, customer communications, and website content. The ELA would participate in the promotional activities by reaching out to its industry contacts through its mailing list, industry newspapers, and industry trade show participation.

The strategy for monitoring and evaluation would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. It would also involve surveys of the students at the completion of the training to assess participant intentions to implement techniques learned in the training. Follow-up surveys would also be conducted later to identify energy-efficiency actions taken as a result of the training. Monitoring and evaluation activities would be performed by the MER.

The incentive proposed by APS for the NR BOT Program is up to 50 percent of the participant cost of training for Facility Maintenance Technician Training (full cost equals \$895) and the Building Operator Training (full cost equals \$1,195). APS indicated that the incentive could be less than 50 percent if the incentive were adopted at 50 percent of current full costs for the training and the costs subsequently escalated. In order to provide more cost certainty, Staff is recommending the incentives for the NR BOT Program be set at \$447.50 for the Facility Maintenance Technician Training (50 percent of \$895) and \$597.50 for the Builder Operator Training (50 percent of \$1,195) or 50 percent of the participant's cost, whichever is less. Staff also recommends that these incentives be paid to the ELA after verification that the participant completed all required course work.

Budget and Societal Benefits

The budget for the NR BOT Program includes categories for planning and administration, marketing, implementation, incentives, and training and technical assistance. For the first three years of the program, the budget is allocated as follows:

Chart 11

**APS' Builder Operator Training Program Estimated Budget
2005-2007**

Year	Planning and Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$3,250	\$2,437	\$5,688	\$0	\$52,000	\$1,625	\$65,000
2006	\$4,000	\$3,000	\$7,000	\$0	\$64,000	\$2,000	\$80,000
2007	\$4,750	\$3,563	\$8,312	\$0	\$76,000	\$2,375	\$95,000
Total	\$12,000	\$9,000	\$21,000	\$0	\$192,000	\$6,000	\$240,000
Percent of Budget	5.0%	3.8%	8.8%	0.0%	80.0%	2.5%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR BOT Program could create opportunities for savings of energy and demand by offering training classes to building operators and technicians and providing incentives to encourage participation. According to Staff's analysis of the program for three years, the NR BOT could provide about \$1.0 million in net benefits over the life of the measures. In addition, the NR BOT Program could reduce annual peak demand by about 643 kW and energy consumption by about 81,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR BOT Program is based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 12
Non-Residential Builder Operator Training Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget¹	Total Societal Costs²	Total Societal Benefits³	Net Societal Benefits⁴
Builder Operator Training	\$240,000	\$864,675	\$1,912,281	\$1,047,606
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

ENERGY INFORMATION SERVICES PROGRAM

Program Concept

The NR EIS Program would provide customers with a web-based energy information tool to give them feedback on the energy consumption and load profiles within their facilities. The program is designed to educate facility managers and operators about how and when energy is used at their facilities for the purpose of placing them in a more informed position to make energy-efficiency improvements. The program is available for large non-residential customers with a single metered site and a monthly peak demand greater than 200 kW based on the past 12 months of billing history. The services would be provided to large APS commercial, industrial, and institutional customers, and APS would provide an incentive of up to \$1,000 to the customer to cover a portion of the cost of the EIS system.

APS would issue a request for proposal to select an energy information services company to serve as the IC for this program. The selected IC would provide the needed equipment, software, and delivery of program products and energy information services offered by this program. This would not be the same IC utilized by the NR Existing, NR New, and NR Small Programs. APS would provide overall program administration for the NR EIS Program.

The technology employed by the NR EIS Program involves the installation of specialized metering equipment to automatically transmit interval load data to a central data collection point over telephone lines. The data are posted to a secured website that customers can access through the use of a password.

Program Products and Services

Through the NR EIS Program, customers would receive monthly usage and demand reports and other valuable usage data that could be analyzed to improve energy usage patterns,

reduce energy use, reduce demands during on-peak periods, and better manage their overall energy consumption.

The web-based interface provided by the NR EIS Program would provide energy managers a combination of tools to graphically analyze energy consumption, demand, and usage during various weather scenarios. It would also provide data to allow comparisons between multiple sites managed by the same operator and to compare against historical data.

APS will contract with an energy information services firm to serve as IC for the NR EIS program. The energy information service IC would provide training and technical assistance to customers to allow them to take full advantage of the program and the equipment installed at their facility. Program participants would be taught necessary skills to take advantage of the data provided by the system. They would learn how to download billing history information and create spreadsheets, charts, and graphs to assist them in identifying strategies to lower energy costs. They would also be taught basic utility rate concepts so they understand the basis for savings by reducing demand or energy consumption. They would also learn how to create reports to their management to justify energy-efficient capital expenditures that would result in energy bill savings.

Both APS and the energy information service IC would provide marketing and promotional efforts to make the NR EIS Program known to eligible participants. The target market would be large non-residential customers having facilities served with a single meter. APS would utilize printed promotional materials, brochures, and website content.

APS proposes to offer one-time incentives of up to \$1,000 per customer to install the equipment and become a program participant. This incentive would be the same even for larger customers installing more sophisticated equipment at a multi-metered site. APS, through its energy information services IC, would also offer assistance in utilizing the equipment to identify energy-efficiency upgrades to their facilities.

The strategy for monitoring and evaluation would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. APS states that this technique involves the MER at an earlier date and results in more timely and accurate data at a lower cost. APS or its MER would access the data provided by the EIS Program itself to observe consumption and demand patterns both before and after program participation to help them measure the impact of energy-efficient measures undertaken as a result of the program.

Budget and Societal Benefits

APS acknowledges that baseline data for this program in its service territory are not available at this time and will not be available until the baseline study currently underway is completed. APS has assumed a \$0.14/kWh per square foot savings estimate from the NR BOT program as a proxy until better data are available.

The budget for the NR EIS Program includes categories for planning and administration, implementation, incentives, consumer education, training and technical assistance, and marketing. For the first three years of the program, the budget is allocated as follows:

Chart 13
APS' Energy Information Services Program Estimated Budget
2005-2007

Year	Planning and Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$3,250	\$2,031	\$6,500	\$65,000	\$2,844	\$1,625	\$81,250
2006	\$4,000	\$2,500	\$8,000	\$80,000	\$3,500	\$2,000	\$100,000
2007	\$4,750	\$2,969	\$9,500	\$95,000	\$4,156	\$2,375	\$118,750
Total	\$12,000	\$7,500	\$24,000	\$240,000	\$10,500	\$6,000	\$300,000
Percent of Budget	4.0%	2.5%	8.0%	80.0%	3.5%	2.0%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR EIS Program could create opportunities for savings of energy and demand by providing incentives for building owners and managers to participate in the program. The data provided through the program combined with the skills taught to properly make use of it could result in more efficient use of energy by participants. According to Staff's analysis of the program for three years, the EIS Program could result in about \$694,000 in net benefits over the life of the measures. In addition, the NR EIS Program could reduce annual peak demand by about 357 kW and energy consumption by about 44,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR EIS Program is based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below:

Chart 14
Non-Residential Energy Information Services Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget ¹	Total Societal Costs ²	Total Societal Benefits ³	Net Societal Benefits ⁴
Energy Information Services	\$300,000	\$354,000	\$1,047,820	\$693,820
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

PROGRAM FLEXIBILITY

Program Flexibility

In each of the Non-Residential programs, APS outlined its desire to review incentive levels and other program elements and to modify them, as needed, during the first year from the approval date of these programs and periodically thereafter. APS proposed to report any modifications resulting from such reviews in its mid-year and year-end reports so that Staff could monitor them.

On November 14, 2005, APS filed revised flexibility language. The issue of flexibility was further discussed at the DSM Collaborative working group meeting on November 15, 2005. Following the discussion and input from the DSM Collaborative, APS made additional changes to its flexibility language and filed an updated version with the Commission on November 21, 2005.

APS' November 21, 2005, filing states that it has provided estimates based on the best available information in the original filing, but that it anticipates flexibility would be needed within the DSM portfolio to maximize program effectiveness, to react to market conditions and customer responses, and to limit administrative costs.

After analyzing APS' November 21, 2005, flexibility request and consulting with APS about the intent of the flexibility language, Staff determined that APS was requesting flexibility to shift funding between any of the five budget categories within a given Non-Residential DSM program. The five budget categories are Planning and Administration, Program Marketing, Program Implementation, Rebates and Incentives, Training and Technical Assistance, and Consumer Education. APS proposed limits on this shifting of funds only with regard to the Planning and Administration category. For the Planning and Administration category, APS proposed to make "reasonable efforts" to limit the amounts expended to 10 percent of the total

funding for each program. Other than this single constraint, APS' request would allow shifting of funds between categories without limit.

APS' requested flexibility would also allow APS to shift up to 30 percent of budgeted funds between programs in the same sector (Residential or Non-Residential), but not across sectors, for a given budget year. APS states that no budget dollars would be shifted away from the Low Income Program, including special funding devoted to tribes, or from the Schools Program.

APS has not proposed a cap on incentive levels. APS has indicated that, as a general guideline, incentives would be set at or below 50 percent of incremental cost. However, APS would provide the Commission with written justification when incentive levels exceed 50 percent of the incremental cost of the measure. This filing would be informational in nature. It should be noted that APS has included several incentives in its Application that currently exceed 50 percent of incremental cost.

The Company has also requested the ability to change baseline efficiency levels and customer incremental costs to the extent that the Federal Energy Policy Act or other energy standards may change during the implementation of a DSM program.

Also included in APS' flexibility language is a provision that, for each program, dollars not spent in a given year would be automatically transferred (carried forward) to the next year's budget for the same program. All budget shifts and other program changes are to be reported in the semi-annual DSM reports submitted to the Commission explaining why the budget shifts and program changes were undertaken.

In addition to the provisions outlined above, APS would notify the Commission in writing of any budget changes that would result in a significant change to a program's cost-benefit ratio and in no case shall a budget change cause the cost-benefit ratio to be less than 1.0 (except for the Low Income Weatherization Program.) APS has also indicated that significant changes to the budget or programs would be discussed by the DSM Collaborative group.

All program budgets and plans outlined in the Portfolio call for a three-year program encompassing 2005, 2006, and 2007. It is clear that no DSM funds in the Non-Residential programs were expended in 2005. Staff believes that the portion of program flexibility allowing unused funds to roll forward into the next year is reasonable.

Staff is concerned with some aspects of the flexibility language and the open-ended nature of some of the shifting requested. Therefore, Staff has included some limitations to APS' flexibility in its recommendations.

STAFF'S ANALYSIS AND RECOMMENDATIONS

Cool Roofs

Staff conducted a Societal Cost Test of all measures included in the Non-Residential programs. All of the measures analyzed by Staff resulted in a positive net benefit to society except for the Cool Roofs measure which is a component of the NR Existing and NR New Programs.

The Cool Roofs measure in APS' analysis consists of two separate components to promote reflective roofing surfaces. The components are Reflective Membranes and Roof Coatings. The two are very different in terms of incremental cost and measure life. Based on research, Staff learned that membranes are not widely used in Arizona where foam roofs are preferred. Staff determined it would be more appropriate to treat membranes and roof coatings as two separate measures. For retrofit applications, Staff's analysis concluded that neither membranes nor roof coatings could be justified by its cost-benefit analysis. For new roofs or where a new coating is going to be applied regardless, Staff recommends that APS encourage customers to apply a white reflective surface and include such measures in its educational materials. However, the marginal cost for the highly reflective surface coatings over the standard surface is zero or negative. Therefore, Staff recommends that no incentives be paid for the Cool Roofs measure at this time.

Diagnostics and Tune-up

The System Diagnostics and Tune-up measure applies to the Schools Program, the NR Existing Program, and the NR Small program. It provides incentives for a service call to diagnose and tune up HVAC equipment and also covers any repairs which could include duct work, refrigerant charge, and airflow improvements required to allow the system to operate in the most efficient manner. APS has outlined an incentive payment scale based upon the tonnage rating of the HVAC equipment being diagnosed and tuned. Incentive levels proposed by APS are \$100 per ton for units 3 tons through 5 tons, \$75 per ton for units 6 tons through 15 tons, and \$50 per ton for units over 15 tons.

Staff is concerned that the method employed to determine incentive payments for the System Diagnostics and Tune-up measure may not accurately reflect the level of work that is actually being done by the HVAC contractor. This has the effect of paying the same incentive to a customer who needed only the diagnosis and refrigerant as would be paid to a customer who required system diagnosis, refrigerant, and duct work. Therefore, Staff recommends that the method for determining incentive payments for the System Diagnostics and Tune-up measure be set at 75 percent of the incremental cost of the system diagnosis, tune-up, and repair work that was performed.

Prescriptive and Custom Efficiency Measures

Customers may choose to adopt both prescriptive and custom efficiency measures to conserve energy within their facilities. Prescriptive measure incentives are paid at a pre-determined incentive payment per unit of the measure installed. Custom efficiency measures are paid at \$0.11 per kWh saved based upon estimated kWh savings calculated in the energy study or simulation required at the time of application for the incentive. In the event that both types of measures are employed in a facility, Staff recommends that APS take all steps necessary to ensure that the energy savings from the prescriptive measures is subtracted from the savings in the energy simulation or study for the custom efficiency measure, so that savings from prescriptive measures are not paid more than once.

Financing Assistance

APS has included the possibility of offering third-party financing assistance as a future component of the NR Existing and the NR Small Programs. The company proposes to use DSM funds to defray the costs associated with this option. The purpose of such a program component would be to assist customers that lack needed capital to invest in energy-efficiency improvements. Until more details of this component of the programs are developed and approved, Staff recommends exclusion of third-party financing assistance from the NR Existing Program and the NR Small Programs at this time.

Schools Program

The Schools Program is unique in that a fixed amount of money, set at \$1,680,000 over three years, is reserved exclusively for schools. Under APS' proposal, once these funds are depleted for a budget year, schools may participate in any other approved non-residential DSM programs for which a school would qualify. However, Staff is concerned that Schools should not be required to utilize all of the school funding prior to being able to participate in other DSM programs. Staff sees no reason to limit schools from participating in other DSM programs before the Schools Program funding is expended. Staff anticipates that larger schools may choose to participate in other programs such as the NR Existing and the NR New Programs leaving more money in the Schools Program budget for smaller districts and charter schools. This would allow schools to take advantage of higher funding limits outside the schools program to undertake larger DSM projects. Therefore, Staff recommends that schools be allowed to participate in any other non-residential DSM Program at any time, either before or after reaching the budget cap.

The degree of participation by schools in the Schools Program and other DSM programs would not be known until APS has had some experience with the program. Staff recommends that APS provide information about the level of school participation in all DSM programs in the 13-month filing that is being recommended by Staff.

Staff has some concern about APS' plan to award funding to schools on a first-come, first-served basis, even though APS has indicated this policy was developed in collaboration with school representatives. Staff is concerned that the smaller districts and charter schools which do not have dedicated energy staffs may not be able to react as quickly as the larger districts. APS' proposed limits of \$15/student per year or \$25,000 per school district per year, whichever is less, should mitigate this problem by assuring that a small number of large districts will not use up all of the funds. In addition, Staff anticipates that its recommendation to allow schools to participate in other non-residential DSM programs, either before or after reaching the cap, would free up more funding for smaller school districts and charter schools will also mitigate the problem. However, without experience under the program, Staff is unable to make such a determination. Therefore, Staff recommends that APS track the use of Schools Program funds by size of school entity and report such findings in its semi-annual DSM reports as well as in the 13-month filing recommended by Staff.

Staff finds no reason to disagree with APS' initial allocation for funding the Schools Program based upon the information provided by APS. However, Staff recommends that APS continually assess opportunities to increase funding levels for schools based on feedback from the DSM collaborative, school representatives and officials, and the results of overall program performance. APS should provide information about its efforts to increase funding for schools in APS' semi-annual reports and the 13-month filing that is being recommended by Staff. At this time, APS will have 12 months of experience under the Schools Program and, based on program performance, funding levels can be reassessed at that time.

Caps on Incentive Payouts

Schools Program: APS' has proposed maximum limits for incentives set at \$15/student per year or \$25,000 per school district per year, whichever is less. However, APS has also requested approval to provide funding in excess of the limits if there are insufficient applications to use all the available funds in a given budget year. Staff has concerns because the details of the manner in which an override of the Schools program cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC. Until the details of the manner in which the override would be administered can be provided and Staff is able to review customer participation levels in each program, Staff cannot recommend approval of APS' proposal to override the Schools program cap. Therefore, at this time, Staff recommends that the incentive cap for all measures paid under the Schools Program be set at \$15/student per year or \$25,000 per school district per year, whichever is less. Staff also recommends that if in the future APS would like to provide for an override of the Schools program incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

NR Existing and NR New Programs: Under APS' proposal, the DSM total incentive for all prescriptive and custom measures undertaken by a single customer would be capped at \$300,000 per customer per budget year. However, APS has requested to allow additional measures and to pay additional incentives over the cap to a customer if there are insufficient applications from other customers to use the funds budgeted for the NR Existing and NR New

Programs. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR Existing and NR New programs. Therefore, at this time, Staff recommends that the incentive cap for all measures paid to any customer under the NR Existing Program and the NR New Program be set at \$300,000 per budget year. Staff also recommends that if in the future APS would like to provide for an override of the NR Existing incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

NR Small Program: The DSM total incentive for all prescriptive and custom measures undertaken by a single customer is capped at \$150,000 per customer per budget year. However, APS proposes to allow additional measures and to pay additional incentives over the cap if there are insufficient applications from other customers to use the funds budgeted for the NR Small Program. APS has indicated that this provision would be implemented based on feedback from the IC, and more details would be available after the IC is hired. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR Small program. Therefore, at this time, Staff recommends that the incentive cap for all measures paid to any customer under the NR Small program be set at \$150,000 per budget year. Staff is also recommending that if, in the future, APS would like to provide for an override of the NR Small cap, it should provide such details in the 13-month filing that is being recommended by Staff.

Incentives for Studies

APS has proposed a wide variety of studies including Design Assistance, Feasibility Studies for custom measures, and commissioning and retro-commissioning studies. Staff is concerned because the incentives for these studies which are set at 50 percent of incremental cost with a maximum limit of \$10,000 per study, could be paid to a customer and then the customer could for various reasons decide not to go ahead with the project. This would result in expending DSM dollars that would produce no societal benefit. While Staff anticipates that this would not occur often, Staff recommends that APS identify the number of instances that incentives were paid for studies for which associated projects were not completed through the verification process. This information should be provided in APS' semiannual reports and in the 13-month filing that Staff is recommending.

Refund of Incentives

Staff is concerned that customers could receive an incentive payment to install prescriptive or custom measures and not install the measures. This would result in expending DSM dollars that would produce no societal benefit. Therefore, Staff recommends that as part of

the application process or through a separate contract, APS require customers to acknowledge that the customer will install all applicable prescriptive or custom measures. Staff also recommends that where identified through the verification process, APS recover any incentives from the customers that were paid for measures that were not installed.

Building Operator Training

The incentive proposed by APS for the NR BOT Program is up to 50 percent of the participant cost of training for Facility Maintenance Technician Training (full cost equals \$895) and the Building Operator Training (full cost equals \$1,195). APS indicated that the incentive could be less than 50 percent if the incentive were adopted at 50 percent of current full costs for the training and the costs subsequently escalated. In order to provide more cost certainty, Staff recommends the incentives for the NR BOT Program be set at \$447.50 for the Facility Maintenance Technician Training (50 percent of \$895) and \$597.50 for the Builder Operator Training (50 percent of \$1,195) or 50 percent of the participant's cost, whichever is less. Staff also recommends that these incentives be paid to the ELA after verification that the participant completed all required course work.

Program Marketing

The Program Marketing budget category includes all expenses related to marketing the program and increasing DSM consumer awareness. APS estimates that the Program Marketing budget for three years would total approximately \$1.7 million. Many of APS' proposals, such as taking advantage of natural opportunities to promote energy-efficiency at the time customers are making energy-related purchase decisions, appear to be reasonable. However, the details surrounding all of APS' marketing strategies including the use of various contractors still need to be developed. Therefore, Staff recommends that, within 90 days after approval of this item, APS submit a detailed Marketing Plan for Staff review. The Marketing Plan should, at a minimum, include all Program Marketing budget items and their anticipated expenses, details on the division of marketing activities between APS and contractors, and the types of marketing pieces that APS plans to develop to promote the Non-Residential programs. Staff further recommends that APS provide copies of all marketing materials for Staff review within 30 days of the development of each piece.

Planning and Administration Expenses

The Planning and Administration budget varies by program; however, APS has indicated that it will make "reasonable efforts" to limit this budget category to 10 percent of the total funding for each program. Staff issued discovery to APS regarding the details of the Planning and Administration budget. The Planning and Administration budget category includes program management, oversight of the implementation contractor, program development, program coordination, and general overhead. APS estimates that the Planning and Administration budget for three years would total approximately \$2.0 million. In response to Staff discovery, APS was able to provide Staff with certain information regarding employee salaries. However, there are other Planning and Administration expense components that are unknown at this time. Due to a

lack of certainty and specificity, Staff does not feel that there is enough information available in order to recommend approval of the Planning and Administration Budget and its expense components at this time. Therefore, Staff recommends that APS not be allowed to recover Planning and Administration expenses at this time. APS could request approval of its Planning and Administration expenses in the 13-month filing that is being recommended by Staff. At that time, 12 months of actual expense data for the Planning and Administration category would be available.

Flexibility

Staff acknowledges that there are arguments both for and against flexibility. APS is not certain, for example, what level of incentive would cause customers to take action and adopt energy-efficiency measures. In addition, APS does not know which programs would achieve greater interest and market penetration and which ones would not. APS has indicated that flexibility is a key to implementing a successful program so that it can make adjustments to maximize the results of the DSM programs. However, Staff is concerned that too much flexibility for new programs could result in loss of the Commission's ability to monitor and provide valuable input regarding certain aspects of the program while it is being developed and implemented. Therefore, Staff has made a number of recommendations to put parameters around the flexibility that APS has requested. In addition, as previously discussed, Staff has recommended that APS return for approval of its non-residential programs within 13 months of a decision in this matter.

Some of the other justifications for program flexibility presented by APS have caused some concern on the part of Staff. For example, APS has indicated that the IC would bring program and technical knowledge that can be used to improve the program plans. APS has further indicated that certain program enhancements may require changes to the programs as they were originally presented to the Commission within the non-residential portion of the Application. APS has indicated to Staff that there are some program features in the Application that it cannot fully explain because the IC would help them to develop the details. Based on this, Staff is concerned about the transparency of certain aspects of the program that the Commission would be approving. For instance, as previously discussed, Staff is concerned about the manner in which the cap for incentives paid to customers would be administered.

APS has also indicated that flexibility would be important to make modifications to the DSM programs based upon the results of the baseline study currently underway and expected to be completed in February 2006. Staff believes certain inputs provided in this filing may be based on data from other regions and may not reflect actual Arizona-specific measures, savings, or cost data. Staff believes it would be important for APS to utilize the new baseline data when it becomes available.

APS has requested authority to adjust incentive levels, as needed, for all measures as long as APS provides written justification to the Commission when incentive levels move above 50 percent of the incremental cost of the energy-efficiency measure. APS has indicated that it has based its incentive levels on criteria such as customer payback periods and other customer

acceptance criteria. APS' current filing contains certain incentive levels that exceed 50 percent of incremental cost and in some cases equal 100 percent of incremental cost. Increasing an individual incentive could be helpful to make a measure or program more viable if customers are not responding to current levels of incentives. Likewise, it may become obvious that lower levels of incentives for a given measure or program could be offered without affecting the participation levels of popular energy-efficiency measures. In a previous Commission proceeding, Staff recommended that incentives not exceed 50 percent of incremental costs for the lighting portion of the Consumer Products Program. Staff made this recommendation to avoid the potential for excessive incentives. Staff is interested in assuring that incentive amounts are set at a level that is necessary to move the market toward installing energy-efficiency measures, but that excessive incentives beyond what is needed to move the market not be offered. Staff believes that an increased level of flexibility is reasonable due to the evolving nature of APS' programs and a lack of Arizona-specific data that will be provided in the future by the baseline study. Therefore, Staff recommends that all financial incentives be capped at a maximum of 75 percent of incremental cost. Staff further recommends that incentives that are proposed to be capped at 50 percent in APS' Application remain capped at 50 percent. These studies and training include the Commercial Qualified Training incentive, the custom efficiency measure incentive, the custom efficiency measure feasibility study incentive, the retro-commissioning study incentive, the commissioning study incentive, and the design assistance incentive.

APS has requested flexibility to directly shift budgeted funds into and out of the Program Planning and Administration category. APS has stated that it would make "reasonable efforts" to limit this budget category to 10 percent of the total funding for each program. Staff's interest in assuring that overhead for program and administrative costs remain at a minimum is to ensure that APS maximize the funds available for direct program expenses which will reduce demand and energy consumption, such as customer incentives. Staff recommends that Program and Administration costs for any given program, such as NR New, not exceed 10 percent of the total program budget.

While recognizing that individual incentives may need to be adjusted either upward or downward, Staff believes that overall budget expenditures for incentives and rebates should not increase significantly from the levels proposed by APS in its Application. Therefore, Staff recommends that the combined expenditure for Rebates and Incentives for the Non-Residential programs from 2005 to 2007 be capped at the current estimated level, which is 52 percent of the overall budget.

APS requested authority to shift up to 30 percent of the funding from one program to another program in the same sector, such as non-residential, per year. Such shifts would be made to take advantage of better performance in one program than another by shifting funds from the poorer performing program to the better performing program. It was agreed within the DSM collaborative group that 20 to 25 percent was a generally accepted shifting range within the industry. Therefore, Staff recommends that APS should be limited to shifting a maximum of 25 percent of budgeted funds from one program to another program in the same sector per calendar year.

APS used a weighted average analysis for each particular group of like measures in its cost-benefit analyses. In some cases, the group as a whole appears to be cost-effective, but certain individual measures within that group appear to not be cost-effective. Staff is concerned that providing an incentive to customers to purchase a product that is not cost-effective is not appropriate. Staff anticipates that some of the not cost-effective measures may actually be cost-effective when Arizona-specific data from the baseline study can be utilized. Therefore, Staff recommends that APS provide incentives only on individual measures that are cost-effective.

It is important that substantial changes in the Non-Residential programs do not occur after approval based upon flexibility language that may be granted in these programs. Therefore, Staff recommends that the nature of the incentives offered as well as the nature of the programs not be changed without Commission approval.

Staff recommends that APS inform the DSM Collaborative working group of progress and significant changes to budgets and/or incentives no later than four months after approval of the Non-Residential programs.

Interim Approval and 13 Month Filing

According to Staff's analysis of the programs for three years, the energy-efficiency measures expected to result from the six Non-Residential programs are estimated to provide about \$50.4 million in net benefits to society over the life of the measures. In addition, the Non-Residential programs are estimated to reduce annual peak demand by about 32.1 MW and energy consumption by about 3.3 million MWh over the life of the measures.

Staff recommends interim approval of APS' Non-Residential DSM programs (Schools, Non-Residential Existing Facilities, Non-Residential New Construction and Major Renovation, Small Non-Residential, Non-Residential Builder Operator Training, and Non-Residential Energy Information Services) with certain program modifications and requirements on an interim basis. Staff recognizes that the DSM Portfolio Plan as filed by APS outlines a work in progress. This is the first such comprehensive DSM study undertaken by APS in recent years, and Staff is aware that the details and sophistication of the programs will evolve as APS gains experience with them. APS has indicated that it will be relying upon future inputs to the program from the IC and from the results of the baseline study. These inputs as well as experience in implementing the programs will no doubt help APS to further develop the details of the Non-Residential programs. On balance, however, Staff finds that the benefits of moving forward with the Non-Residential programs at this time outweigh the benefits of waiting until the application can be further refined. In this manner actual savings from these programs can be realized earlier.

Implementing DSM programs of this size and scope is a new experience for APS and, in an effort to apprise the Commission of the results and ongoing design of the programs, Staff recommends that, within 13 months of a decision in this matter, APS should refile the Non-Residential portion of its DSM Portfolio Plan, with 12 months of actual data, for final Commission approval. Thirteen months was chosen because: 1) it will allow APS one month to

prepare its filing based on a full year of experience with the programs thus removing any seasonal variations, 2) the baseline study will have been completed and sufficient time for analysis of its findings will have passed, 3) a full year of actual charges against the various budget categories will have accrued, 4) enough time will have passed to give some indication of which programs are attracting participation and which are not, and 5) the IC will have had sufficient time to refine the details of some programs that are not fully developed at this time.

Staff recommends that the 13-month refiling of the Non-Residential DSM programs should include information on the status of the programs and explain changes that were made to budgets, incentive levels, and program implementation. In addition, APS should also file detailed information regarding its Planning and Administration budget and expenses for consideration at that time, detailed information about Schools Program participation and budget levels, schools participation in other Non-Residential DSM programs, and identify efforts that APS has made to increase the funding levels for the Schools program. The study should include Societal Cost Test analyses utilizing the new baseline data. At that time, the Commission would have the opportunity to make any adjustments or program changes deemed necessary which could include modifications to recommendations made in this proceeding.

SUMMARY OF RECOMMENDATIONS

1. Staff recommends interim approval of APS' Non-Residential DSM programs (Schools, Non-Residential Existing Facilities, Non-Residential New Construction and Major Renovation, Small Non-Residential, Non-Residential Builder Operator Training, and Non-Residential Energy Information Services) with certain program modifications and requirements described below on an interim basis.
2. Staff recommends that, within 13 months of a decision in this matter, APS should refile the Non-Residential portion of its DSM Portfolio Plan, with 12 months of actual data, for final Commission approval.
3. Staff recommends that the 13-month refiling of the Non-Residential DSM programs should include information on the status of the programs and explain changes that were made to budgets, incentive levels, and program implementation. The study should include Societal Cost Test analyses utilizing the new baseline data.
4. For new roofs or where a new coating is going to be applied regardless, Staff recommends that APS encourage customers to apply a white reflective surface and include such measures in its educational materials. Staff also recommends that no incentives be paid for the Cool Roofs measure at this time.
5. Staff recommends that the method for determining incentive payments for the System Diagnostics and Tune-up measure be set at up to 75 percent of the incremental cost of the system diagnosis, tune-up, and repair work that was performed.

6. Staff recommends that APS take all steps necessary to ensure that the energy savings from the prescriptive measures is subtracted from the savings in the energy simulation or study for the custom efficiency measure, so that savings from prescriptive measures are not paid more than once.
7. Staff recommends exclusion of third-party financing assistance from the NR Existing and the NR Small Programs at this time.
8. Staff recommends that schools be allowed to participate in any other non-residential DSM Program at any time, either before or after reaching the budget cap.
9. Staff recommends that APS provide information about the level of school participation in all DSM programs in the 13-month filing that is being recommended by Staff.
10. Staff recommends that APS track the use of Schools Program funds by size of school entity and report such findings in its semi-annual DSM reports as well as in the 13-month filing recommended by Staff.
11. Staff recommends that APS continually assess opportunities to increase funding levels for schools based on feedback from the DSM collaborative, school representatives and officials, and the results of overall program performance. APS should provide information about its efforts to increase funding for schools in APS' semi-annual reports and the 13-month filing that is being recommended by Staff.
12. Staff recommends that the incentive cap for all measures paid under the Schools Program be set at \$15/student per year or \$25,000 per school district per year, whichever is less. Staff also recommends that if in the future APS would like to provide for an override of the Schools program incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.
13. Staff recommends that the incentive cap for all measures paid to any customer under the NR Existing Program and the NR New Program be set at \$300,000 per budget year. Staff also recommends that if in the future APS would like to provide for an override of the NR Existing incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.
14. Staff recommends that the incentive cap for all measures paid to any customer under the NR Small program be set at \$150,000 per budget year. Staff is also recommending that if, in the future, APS would like to provide for an override of the NR Small cap, it should provide such details in the 13-month filing that is being recommended by Staff.

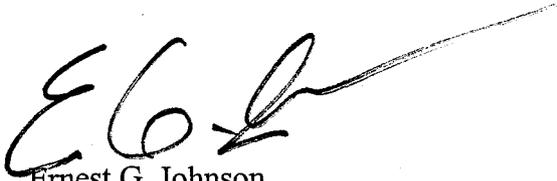
15. Staff recommends that APS identify the number of instances that incentives were paid for studies for which associated projects were not completed through the verification process. This information should be provided in APS' semiannual reports and in the 13-month filing that Staff is recommending.
16. Staff recommends that as part of the application process or through a separate contract, APS require customers to acknowledge that the customer will install all applicable prescriptive or custom measures. Staff also recommends that where identified through the verification process, APS recover any incentives from the customers that were paid for measures that were not installed.
17. Staff recommends the incentives for the NR BOT Program be set at \$447.50 for the Facility Maintenance Technician Training (50 percent of \$895) and \$597.50 for the Builder Operator Training (50 percent of \$1,195) or 50 percent of the participant's cost, whichever is less. Staff also recommends that these incentives be paid to the ELA after verification that the participant completed all required course work.
18. Staff recommends that, within 90 days after approval of this item, APS submit a detailed Marketing Plan for Staff review. The Marketing Plan should, at a minimum, include all Program Marketing budget items and their anticipated expenses, details on the division of marketing activities between APS and contractors, and the types of marketing pieces that APS plans to develop to promote the Non-Residential programs. Staff further recommends that APS provide copies of all marketing materials for Staff review within 30 days of the development of each piece.
19. Staff recommends that APS not be allowed to recover Planning and Administration expenses at this time. APS could request approval of its Planning and Administration expenses in the 13-month filing that is being recommended by Staff.
20. Staff recommends that all financial incentives be capped at a maximum of 75 percent of incremental cost. Staff further recommends that incentives that are proposed to be capped at 50 percent in APS' Application remain capped at 50 percent. These studies and training include the Commercial Qualified Training incentive, the custom efficiency measure incentive, the custom efficiency measure feasibility study incentive, the retro-commissioning study incentive, the commissioning study incentive, and the design assistance incentive.
21. Staff recommends that Program and Administration costs for any given program, such as NR New, not exceed 10 percent of the total program budget.
22. Staff recommends that the combined expenditure for Rebates and Incentives for the Non-Residential programs from 2005 to 2007 be capped at the current estimated level, which is 52 percent of the overall budget.

THE COMMISSION

January 13, 2006

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23. Staff recommends that APS should be limited to shifting a maximum of 25 percent of budgeted funds from one program to another program in the same sector per calendar year.
24. Staff recommends that APS only provide incentives on individual measures that are cost-effective.
25. Staff recommends that the nature of the incentives offered as well as the nature of the programs not be changed without Commission approval.
26. Staff recommends that APS inform the DSM Collaborative working group of progress and significant changes to budgets and/or incentives no later than four months after approval of the Non-Residential programs.



Ernest G. Johnson
Director
Utilities Division

EGJ:JDA:EAA

ORIGINATORS: Jerry Anderson and Erinn Andreasen

Examples of APS Proposed Prescriptive Incentives - Lighting

Programs with Prescriptive Measures

Equipment Type	Replace (for retrofit applications)	Incentive	Unit	Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
Standard T8 or T5 Electronic Ballast Fixtures							
2-foot to 4-foot lamp	T12 magnetic ballast	\$ 5.00	per lamp	X	X		X
8-foot lamp	T12 magnetic ballast	\$ 8.00	per lamp	X	X		X
Premium T8 Electronic Ballast Fixtures							
2-foot to 4-foot lamp	T12 magnetic ballast	\$8.00	per lamp	X	X	\$1.50	X
8-foot lamp	T12 magnetic ballast	\$10.00	per lamp	X	X	\$2.50	X
T5 F Electronic Ballast							
1 Lamp T5 (2' - 4')	T12 magnetic ballast	\$3.00	per fixture			X	
2 Lamp T5 (2' - 4')	T12 magnetic ballast	\$7.00	per fixture			X	
4 Lamp T5 HO F28	Metal Halide	\$75.00	per fixture	X	X	X	X
Compact Fluorescent Lamps (CFL)							
Screw-In All Sizes	Incandescent	\$1.75	per lamp	X	X	X	X
Exit Signs (LED or Electroluminescent)							
Double or Single Face	Incandescent or CFL	\$25.00	per unit	X	X	X	X
Occupancy Sensors & Daylighting Controls							
All Sensor Mountings		\$40.00	per sensor	X	X	X	X
Daylighting Controls		\$100.00	per unit		X	X	X
Delamping							
3 Lamp T8	4 Lamp T12	\$7.00	per fixture	X	X		X
2 Lamp T8 or T5	4 Lamp T12	\$13.00	per fixture	X	X		X
2 Lamp T8 or T5	3 Lamp T12	\$7.00	per fixture	X	X		X
1 Lamp T8 or T5	2 Lamp T12	\$7.00	per fixture	X	X		X
3 Lamp T8 or T5	4 Lamp T8	\$3.00	per fixture	X	X		X
2 Lamp T8 or T5	4 Lamp T8	\$7.00	per fixture	X	X		X
2 Lamp T8 or T5	3 Lamp T8	\$3.00	per fixture	X	X		X
1 Lamp T8 or T5	2 Lamp T8	\$3.00	per fixture	X	X		X
Outdoor Lighting							
CFL ≤ 26 W	Incandescent	\$2.50	per fixture	X	X	X	X
CFL > 26 W ≤ 55 W	Incandescent	\$3.50	per fixture	X	X	X	X
CFL > 55 W	Incandescent	\$5.00	per fixture	X	X	X	X
CFL Flood	Halogen PAR	\$3.50	per fixture	X	X		X
High Pressure Sodium	Halogen PAR	\$25.00	per fixture	X	X		X
High Pressure Sodium	Mercury Vapor	\$10.00	per fixture	X	X	X	X
High Pressure Sodium	Metal Halide	\$10.00	per fixture	X	X	X	X

Examples of APS Proposed Prescriptive Incentives - HVAC and Building Envelope Measures

Exhibit 1
Page 2 of 5

Equipment Type/Measure	Size Category	Qualifying Efficiency	Qualifying Incentive	Unit	Additional Efficiency Incentive	Efficiency Incentive Details	Programs with Prescriptive Measures			
							Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
Air Cooled AC Units (Split System and Single Package Units)	≤5 Tons > 5 Tons ≤10 Tons > 10 Tons	11.6 EER ¹ 11.4 EER 11.2 EER	\$50.00 \$50.00 \$25.00	per ton per ton per ton	\$30.00 \$30.00 \$30.00	per EER point over 11.6 per ton per EER point over 11.4 per ton per EER point over 11.2 per ton	X	X	X	X
							X	X	X	X
							X	X	X	X
Water Cooled Chillers	All Sizes < 150 Tons ≥150 Tons□	.61 kW/Ton 1.25 kW/Ton 1.25 kW/Ton	\$10.00 \$10.00 \$15.00	per ton per ton per ton	\$200.00 \$200.00 \$200.00	per kW/Ton under .61 per ton per kW/Ton under 1.25 per ton per kW/Ton under 1.25 per ton	X	X	X	X
							X	X	X	X
Quality Installation	≤10 Tons > 10 Tons ≤25 Tons > 25 Tons	NA NA NA	\$125.00 \$100.00 \$75.00	per ton per ton per ton			X	X	X	X
							X	X	X	X
							X	X	X	X
Diagnostic Tune Up	≤5 Tons > 5 Tons ≤12.5 Tons > 12.5 Tons	NA NA NA	\$100.00 \$75.00 \$50.00	per ton per ton per ton			X	X	X	X
							X	X	X	X
							X	X	X	X
Programmable Thermostats	NA	NA	\$50.00	per unit			X	X	X	
							X	X	X	
Cool Roofs ²	NA	NA	\$0.50	per Sq Ft.			X	X		

¹EER refers to the energy efficiency rating of the unit. EER is the unit's BTU rating divided by its wattage.

² Both roof coatings and single membrane applications that have a minimum solar reflectance of 0.65 would be eligible.

Examples of APS Proposed Prescriptive Incentives - Motors

Horse Power ODP and TEFC	3600 RPM		1800 RPM		1200 RPM		Incentive/HP ¹	Programs with Prescriptive Measures			
	Open	Closed	Open	Closed	Open	Closed		Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
1	85.4%	77.6%	85.7%	85.0%	82.2%	82.7%	\$20.00	X	X	X	X
1.5	86.7%	85.1%	86.9%	87.2%	86.2%	87.3%	\$18.00	X	X	X	X
2	86.1%	86.1%	87.5%	87.4%	87.1%	88.1%	\$12.00	X	X	X	X
3	86.1%	87.6%	89.8%	89.7%	89.3%	89.0%	\$7.00	X	X	X	X
5	88.5%	89.5%	90.4%	90.2%	90.1%	90.0%	\$6.00	X	X	X	X
7.5	89.7%	90.5%	91.7%	91.5%	91.5%	91.4%	\$6.00	X	X	X	X
10	90.4%	91.7%	92.0%	91.8%	92.0%	91.7%	\$4.00	X	X	X	X
15	91.0%	91.8%	93.2%	92.7%	92.7%	92.5%	\$2.50	X	X	X	X
20	91.8%	92.1%	93.3%	93.3%	92.9%	92.5%	\$2.50	X	X	X	X
25	92.9%	92.9%	94.0%	93.8%	93.7%	93.4%	\$2.50	X	X	X	X
30	93.3%	92.7%	94.0%	93.9%	94.0%	93.7%	\$2.50	X	X	X	X
40	93.6%	93.4%	94.5%	94.6%	94.5%	94.3%	\$2.50	X	X	X	X
50	93.7%	93.9%	94.9%	94.9%	94.6%	94.4%	\$2.50	X	X	X	X
60	94.3%	94.3%	95.6%	95.2%	95.1%	94.9%	\$2.00	X	X	X	X
75	94.4%	94.5%	95.3%	95.4%	95.3%	94.9%	\$1.50	X	X	X	X
100	94.6%	94.8%	95.9%	95.5%	95.5%	95.1%	\$1.50	X	X	X	X
125	94.7%	95.2%	95.9%	95.4%	95.7%	95.1%	\$1.50	X	X	X	X
150	94.8%	95.5%	96.1%	95.8%	95.9%	95.9%	\$1.50	X	X	X	X
> 150	95.1%	95.7%	96.2%	96.3%	96.0%	95.8%	\$1.50	X	X	X	X
Variable Speed Drives											
All Sizes							\$50.00	X	X	X	X

¹Incentive levels for motors were revised by APS on November 10, 2005 and therefore do not match the original application.

Examples of APS Proposed Prescriptive Incentives - Refrigeration

Exhibit 1
Page 4 of 5

Equipment Type	Unit	Incentive per Unit	Programs with Prescriptive Measures			
			Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
Strip Curtains on Walk-Ins	Linear Foot	\$5.00	X	X	X	X
Night Covers	Linear Foot	\$10.00	X	X	X	X
Anti-Sweat Heater Controls	Door	\$200.00	X	X	X	X
Reach in Cooler Controls	Reach in Cooler	\$100.00	X	X	X	X
High Efficiency Ice Makers*	Ice Maker	\$50.00	X	X	X	X
High Efficiency Reach-in Freezer**	Freezer	\$75.00	X	X	X	X
High Efficiency Reach-in Refrigerators**	Refrigerator	\$75.00	X	X	X	X
High Efficiency Evap Fan Motors	Motor	\$15.00	X	X	X	X
PSC Motor	Motor	\$25.00	X	X	X	X
EC Motor	Motor	\$25.00	X	X	X	X
High Efficiency Vending Machines	Vending Machine	\$100.00	X	X	X	X
Beverage Case Controls	Vending Machine	\$25.00	X	X	X	X
Snack Machine Controls	Vending Machine	\$25.00	X	X	X	X

* Must meet the Federal Energy Management Program Recommended Efficiency levels of 110 lbs of ice per kWh.
 ** Must be Energy Star to qualify.

Examples of APS Proposed Incentives - Other Measures/Programs

Measure	Incentive per Project	Unit	Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
Design Assistance						
Large Office	\$10,000	average square feet	X		X	
College/University	\$7,500	average square feet				
Custom Measures	\$0.11	per estimated kWh saved	X	X	X	
Program	Participant					
Builder Operator Training	\$525					
Program	Participant					
Energy Information Services	\$1,000					

2005-2007 Non-Residential DSM - APS Estimated Budget

SCHOOLS

Program Area	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Budget
Lighting	\$164,000	\$25,000	\$125,000	\$1,158,000	\$183,000	\$25,000	\$1,680,000	100.0%

EXISTING FACILITIES

Program Area	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Budget
Lighting	336,084	305,977	832,509	1,701,428	117,630	67,218	3,360,846	49.7%
HVAC	79,220	72,123	196,235	401,050	27,726	15,844	792,198	11.7%
Refrigeration	37,509	34,149	92,914	189,892	13,129	7,502	375,095	5.5%
Motors	137,547	125,226	340,716	696,331	48,141	27,509	1,375,470	20.3%
Custom Efficiency	63,141	57,485	156,405	319,651	22,099	12,628	631,409	9.3%
Building Envelope	22,505	20,490	55,749	113,935	7,877	4,501	225,057	3.3%
Total	676,006	615,450	1,674,528	3,422,287	236,602	135,202	6,760,075	100.0%
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%	100.0%	

NEW CONSTRUCTION AND MAJOR RENOVATION

Program Area	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Budget
Lighting	184,002	167,518	455,789	931,509	64,401	36,801	1,840,020	25.0%
HVAC	73,602	67,008	182,316	372,604	25,761	14,721	736,012	10.0%
Refrigeration	36,801	33,503	91,157	186,301	12,879	7,359	368,000	5.0%
Motors	147,201	134,015	364,630	745,208	51,521	29,439	1,472,014	20.0%
Custom Efficiency	220,803	201,023	546,946	1,117,812	77,280	44,160	2,208,024	30.0%
Design Efficiency	73,602	67,008	182,316	372,604	25,761	14,721	736,012	10.0%
Total	736,011	670,075	1,823,154	3,726,038	257,603	147,201	7,360,082	100.0%
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%	100.0%	

SMALL NON-RESIDENTIAL

Program Area	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Budget
Lighting	248,200	225,966	614,814	1,256,514	86,870	49,640	2,482,004	56.9%
HVAC	58,504	53,263	144,921	296,178	20,477	11,701	585,044	13.4%
Refrigeration	27,701	25,219	68,617	140,236	9,606	5,540	277,009	6.4%
Motors	101,579	92,480	251,620	514,246	35,553	20,316	1,015,794	23.3%
Total	435,984	396,928	1,079,972	2,207,174	152,506	87,197	4,359,851	100.0%
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%	100.0%	

*The totals on this exhibit do not sum exactly to the program totals included in Chart 1 of this memo. However, the differences are negligible.

BUILDER OPERATOR TRAINING

<u>Program Area</u>	<u>Planning & Administration</u>	<u>Program Marketing</u>	<u>Program Implementation</u>	<u>Rebates & Incentives</u>	<u>Training & Technical Assistance</u>	<u>Consumer Education</u>	<u>Total</u>	<u>Percent of Budget</u>
Program Area								
Training	\$12,000	\$9,000	\$21,001	\$0	\$192,000	\$6,000	\$240,000	100.0%
Percent of Budget	5.0%	3.8%	8.8%	0.0%	80.0%	2.5%	100.0%	

ENERGY INFORMATION SERVICES

<u>Program Area</u>	<u>Planning & Administration</u>	<u>Program Marketing</u>	<u>Program Implementation</u>	<u>Rebates & Incentives</u>	<u>Training & Technical Assistance</u>	<u>Consumer Education</u>	<u>Total</u>	<u>Percent of Budget</u>
Program Area								
Information Services	\$12,000	\$7,500	\$24,000	\$240,000	\$10,500	\$6,000	\$300,000	100.0%
Percent of Budget	4.0%	2.5%	8.0%	80.0%	3.5%	2.0%	100.0%	

<u>NON-RESIDENTIAL TOTAL</u>	<u>Planning & Administration</u>	<u>Program Marketing</u>	<u>Program Implementation</u>	<u>Rebates & Incentives</u>	<u>Training & Technical Assistance</u>	<u>Consumer Education</u>	<u>Total</u>	<u>Percent of Budget</u>
NON-RESIDENTIAL TOTAL								
Total	\$2,036,001	\$1,723,953	\$4,747,655	\$10,753,499	\$1,032,301	\$406,600	\$20,700,008	100.0%
Percent of Total Budget	9.8%	8.3%	22.9%	51.9%	5.0%	2.0%	100.0%	

APS Budget Category Definitions

<u>Planning and Administration</u>	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination and general overhead expenses
<u>Program Marketing</u>	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).
<u>Program Implementation</u>	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.
<u>Rebates & Incentives</u>	Includes all dollars that go toward customer rebates and incentives.
<u>Training & Technical Assistance</u>	Includes all dollars that are used for energy efficiency training and technical assistance for Non-Residential program participants.
<u>Consumer Education</u>	Includes dollars that are used to support general consumer education about energy efficient improvements.

1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2 JEFF HATCH-MILLER
Chairman

3 WILLIAM A. MUNDELL
Commissioner

4 MARC SPITZER
Commissioner

5 MIKE GLEASON
Commissioner

6 KRISTIN K. MAYES
Commissioner

7

8 IN THE MATTER OF ARIZONA PUBLIC) SERVICE COMPANY FOR APPROVAL OF) 9 ITS DEMAND-SIDE MANAGEMENT) 10 PROGRAM PORTFOLIO PLAN AND) RELATED PROGRAMS.)	DOCKET NO. E-01345A-05-0477 DECISION NO. _____ <u>ORDER</u>
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11

12 Open Meeting
January 24 and 25, 2006
13 Phoenix, Arizona

14

15 BY THE COMMISSION:

16 FINDINGS OF FACT

17 1. Arizona Public Service Company ("APS") is certificated to provide electric service as a
18 public service corporation in the State of Arizona.

19 2. On July 1, 2005, APS filed an application for approval of its Demand-Side Management
20 Portfolio Plan and related programs ("Portfolio Plan" or "Application"). The Portfolio Plan
21 includes various demand-side management ("DSM") programs that would provide DSM
22 opportunities for both residential and non-residential participants. The Portfolio Plan was filed in
23 response to APS' DSM obligations provided for in Commission Decision No. 67744. APS filed
24 revisions to its original filing on November 14, 2005, and November 21, 2005.

25 3. Staff has filed an interim report with Staff's initial recommendations in regard to the Non-
26 Residential portion of the DSM programs included in the APS' Portfolio Plan. Staff stated that
27 these recommendations do not necessarily reflect Staff's final recommendations regarding APS'

28

1 non-residential DSM proposals. The report can be found at the end of this document as
2 Attachment A.

3 4. Staff has recommended interim approval of the Non-Residential portion of the APS
4 Application with certain program modifications and requirements discussed in Staff's Analysis
5 and Recommendations section of the memo attached to this decision. In response to Staff
6 discovery on many issues, APS has indicated that it has provided all available detail to Staff.
7 However, because these are new programs, there are still details that have not yet been established,
8 resulting in a lack of certainty and specificity in some areas of the Application. Therefore, Staff
9 has recommended that, within 13 months of a decision in this matter, APS should refile the Non-
10 Residential portion of its DSM Portfolio Plan, with 12 months of actual data, for final Commission
11 approval. At that time, the Commission will have the benefit of the results of a baseline study
12 currently in process, 12 months of experience under each Non-Residential DSM program, and
13 actual DSM expense data for each budget category. In addition, the Commission would have the
14 opportunity to make any adjustments or program changes deemed necessary which could include
15 modifications to recommendations made in this proceeding.

16 5. Staff finds that the benefits of moving forward with the Non-Residential programs at this
17 time with a recommendation for interim approval outweigh the benefits of waiting until more
18 information is available. In this manner, actual savings from these programs can be realized
19 earlier. Staff estimates that the net benefits to society from these programs are \$50.4 million over
20 the life of the measures, if the programs are in place for three years.

21 6. Staff's recommendations are summarized below:

- 22
- 23 a. Staff has recommended interim approval of APS' Non-Residential DSM programs
24 (Schools, Non-Residential Existing Facilities, Non-Residential New Construction
25 and Major Renovation, Small Non-Residential, Non-Residential Builder Operator
26 Training, and Non-Residential Energy Information Services) with certain program
27 modifications and requirements described below on an interim basis.
 - 28 b. Staff has recommended that, within 13 months of a decision in this matter, APS
should refile the Non-Residential portion of its DSM Portfolio Plan, with 12 months
of actual data, for final Commission approval.

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- c. Staff has recommended that the 13-month refiling of the Non-Residential DSM programs should include information on the status of the programs and explain changes that were made to budgets, incentive levels, and program implementation. The study should include Societal Cost Test analyses utilizing the new baseline data
- d. For new roofs or where a new coating is going to be applied regardless, Staff has recommended that APS encourage customers to apply a white reflective surface and include such measures in its educational materials. Staff also recommends that no incentives be paid for the Cool Roofs measure at this time.
- e. Staff has recommended that the method for determining incentive payments for the System Diagnostics and Tune-up measure be set at up to 75 percent of the incremental cost of the system diagnosis, tune-up, and repair work that was performed.
- f. Staff has recommended that APS take all steps necessary to ensure that the energy savings from the prescriptive measures is subtracted from the savings in the energy simulation or study for the custom efficiency measure, so that savings from prescriptive measures are not paid more than once.
- g. Staff has recommended exclusion of third-party financing assistance from the NR Existing and the NR Small Programs at this time.
- h. Staff has recommended that schools be allowed to participate in any other non-residential DSM Program at any time, either before or after reaching the budget cap.
- i. Staff has recommended that APS provide information about the level of school participation in all DSM programs in the 13-month filing that is being recommended by Staff.
- j. Staff has recommended that APS track the use of Schools Program funds by size of school entity and report such findings in its semi-annual DSM reports as well as in the 13-month filing recommended by Staff.
- k. Staff has recommended that APS continually assess opportunities to increase funding levels for schools based on feedback from the DSM collaborative, school representatives and officials, and the results of overall program performance. APS should provide information about its efforts to increase funding for schools in APS' semi-annual reports and the 13-month filing that is being recommended by Staff.

- 1 l. Staff has recommended that the incentive cap for all measures paid under the
2 Schools Program be set at \$15/student per year or \$25,000 per school district per
3 year, whichever is less. Staff also recommends that if in the future APS would like
4 to provide for an override of the Schools program incentive cap, it should provide
5 such details in the 13-month filing that is being recommended by Staff.
- 6 m. Staff has recommended that the incentive cap for all measures paid to any customer
7 under the NR Existing Program and the NR New Program be set at \$300,000 per
8 budget year. Staff also recommends that if in the future APS would like to provide
9 for an override of the NR Existing incentive cap, it should provide such details in
10 the 13-month filing that is being recommended by Staff.
- 11 n. Staff has recommended that the incentive cap for all measures paid to any customer
12 under the NR Small program be set at \$150,000 per budget year. Staff is also
13 recommending that if, in the future, APS would like to provide for an override of
14 the NR Small cap, it should provide such details in the 13-month filing that is being
15 recommended by Staff.
- 16 o. Staff has recommended that APS identify the number of instances that incentives
17 were paid for studies for which associated projects were not completed through the
18 verification process. This information should be provided in APS' semiannual
19 reports and in the 13-month filing that Staff is recommending.
- 20 p. Staff has recommended that as part of the application process or through a separate
21 contract, APS require customers to acknowledge that the customer will install all
22 applicable prescriptive or custom measures. Staff also recommends that where
23 identified through the verification process, APS recover any incentives from the
24 customers that were paid for measures that were not installed.
- 25 q. Staff has recommended the incentives for the NR BOT Program be set at \$447.50
26 for the Facility Maintenance Technician Training (50 percent of \$895) and \$597.50
27 for the Builder Operator Training (50 percent of \$1,195) or 50 percent of the
28 participant's cost, whichever is less. Staff also recommends that these incentives be
29 paid to the ELA after verification that the participant completed all required course
30 work.
- 31 r. Staff has recommended that, within 90 days after approval of this item, APS submit
32 a detailed Marketing Plan for Staff review. The Marketing Plan should, at a
33 minimum, include all Program Marketing budget items and their anticipated
34 expenses, details on the division of marketing activities between APS and
35 contractors, and the types of marketing pieces that APS plans to develop to promote
36 the Non-Residential programs. Staff further recommends that APS provide copies
37 of all marketing materials for Staff review within 30 days of the development of
38 each piece.

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- s. Staff has recommended that APS not be allowed to recover Planning and Administration expenses at this time. APS could request approval of its Planning and Administration expenses in the 13-month filing that is being recommended by Staff.

- t. Staff has recommended that all financial incentives be capped at a maximum of 75 percent of incremental cost. Staff further recommends that incentives that are proposed to be capped at 50 percent in APS' Application remain capped at 50 percent. These studies and training include the Commercial Qualified Training incentive, the custom efficiency measure incentive, the custom efficiency measure feasibility study incentive, the retro-commissioning study incentive, the commissioning study incentive, and the design assistance incentive.

- u. Staff has recommended that Program and Administration costs for any given program, such as NR New, not exceed 10 percent of the total program budget.

- v. Staff has recommended that the combined expenditure for Rebates and Incentives for the Non-Residential programs from 2005 to 2007 be capped at the current estimated level, which is 52 percent of the overall budget.

- w. Staff has recommended that APS should be limited to shifting a maximum of 25 percent of budgeted funds from one program to another program in the same sector per calendar year.

- x. Staff has recommended that APS only provide incentives on individual measures that are cost-effective.

- y. Staff has recommended that the nature of the incentives offered as well as the nature of the programs not be changed without Commission approval.

- z. Staff has recommended that APS inform the DSM Collaborative working group of progress and significant changes to budgets and/or incentives no later than four months after approval of the Non-Residential programs.

CONCLUSIONS OF LAW

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1. APS is certificated to provide electric service as a public service corporation in the State of Arizona.
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 17, 2006, concludes that it is in the public interest to approve the Non-Residential portion of APS' Portfolio Plan on an interim basis.

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ORDER

IT IS THEREFORE ORDERED that the Non-Residential portion of APS' Portfolio Plan is approved on an interim basis.

IT IS FURTHER ORDERED that the recommendations proposed by Staff listed in Finding of Fact 6 are approved.

IT IS FURTHER ORDERED that this decision should become effective immediately.

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

CHAIRMAN	COMMISSIONER
COMMISSIONER	COMMISSIONER
	COMMISSIONER

IN WITNESS WHEREOF, I BRIAN C. McNEIL, 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 _____, 2006.

BRIAN C. McNEIL
Executive Director

DISSENT: _____

DISSENT: _____

EGG:EAA:red:JG

1 SERVICE LIST FOR:
2 DOCKET NO. E-01345A-05-0477

3 Mr. Thomas L. Mumaw
4 Ms. Karilee S. Ramaley
Pinnacle West Capital Corporation
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14 Mr. Ernest G. Johnson
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Attachment A

OPEN MEETING

MEMORANDUM

TO: THE COMMISSION

FROM: Utilities Division

DATE: January 17, 2006

RE: IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR APPROVAL OF ITS DEMAND SIDE MANAGEMENT PROGRAM PORTFOLIO PLAN AND RELATED PROGRAMS. (DOCKET NO. E-01345A-05-0477)

INTERIM REPORT

This report is an interim report with Staff's initial recommendations in regards to the Non-Residential demand-side management programs ("DSM") included in the Arizona Public Service Company ("APS") Demand-Side Management Portfolio Plan and related programs ("Portfolio Plan" or "Application"). These recommendations do not necessarily reflect Staff's final recommendations regarding APS' non-residential DSM proposals.

Staff is recommending interim approval of the Non-Residential portion of the APS Application with certain program modifications and requirements discussed in Staff's Analysis and Recommendations section of this document. In response to Staff discovery on many issues, APS has indicated that it has provided all available detail to Staff. However, because these are new programs, there are still details that have not yet been established, resulting in a lack of certainty and specificity in some areas of the Application. Therefore, Staff is recommending that, within 13 months of a decision in this matter, APS should refile the Non-Residential portion of its DSM Portfolio Plan, with 12 months of actual data, for final Commission approval. At that time, the Commission will have the benefit of the results of a baseline study currently in process, 12 months of experience under each Non-Residential DSM program, and actual DSM expense data for each budget category. In addition, the Commission would have the opportunity to make any adjustments or program changes deemed necessary which could include modifications to recommendations made in this proceeding.

Staff finds that the benefits of moving forward with the Non-Residential programs at this time with a recommendation for interim approval outweigh the benefits of waiting until more information is available. In this manner, actual savings from these programs can be realized earlier. Staff estimates that the net benefits to society from these programs are \$50.4 million over the life of the measures, if the programs are in place for three years.

BACKGROUND

On July 1, 2005, APS filed an application for approval of its Portfolio Plan. The Portfolio Plan includes various DSM programs that would provide DSM opportunities for both residential and non-residential participants. The Portfolio Plan was filed in response to APS' DSM obligations provided for in Commission Decision No. 67744. APS filed revisions to its original filing on November 14, 2005, and November 21, 2005.

Under Commission Decision No. 67744, APS is obligated to spend at least \$16 million per year, or \$48 million over the initial three-year period of 2005 to 2007, on Commission-approved DSM programs and to implement and maintain a collaborative DSM working group to facilitate stakeholder input on program development and implementation. Decision No. 67744 approved a Preliminary Energy-efficiency DSM Plan. APS was to file a final plan within 120 days of the Decision. The Portfolio Plan is the final plan. Drafts of the DSM programs contained in the Portfolio Plan were discussed within the DSM collaborative group.

The Application consists of Residential and Non-Residential categories. At this time, Staff is only addressing the DSM programs comprising the Non-Residential portion of APS' DSM Application. This consists of the following six programs: Schools, Non-Residential Existing Facilities ("NR Existing"), Non-Residential New Construction and Major Renovation ("NR New"), Small Non-Residential ("NR Small"), Non-Residential Builder Operator Training ("NR BOT"), and Non-Residential Energy Information Services ("NR EIS"). The six Non-Residential programs being addressed at this time represent slightly more than half of the \$48 million APS is obligated to spend over three years. A summary of APS' overall estimated budget is provided below.

**Chart 1
APS' Overall Estimated DSM Budget
2005-2007**

Program	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Non-Residential Budget
NON-RESIDENTIAL								
Schools	\$164,000	\$25,000	\$125,000	\$1,158,000	\$183,000	\$25,000	\$1,680,000	8.1%
Existing Facilities	\$676,007	\$615,448	\$1,674,527	\$3,422,287	\$236,603	\$135,203	\$6,760,075	32.7%
New Construction & Major Renovation	\$736,007	\$670,074	\$1,823,152	\$3,726,037	\$257,603	\$147,202	\$7,360,075	35.6%
Small Non-Residential	\$435,984	\$396,928	\$1,079,972	\$2,207,175	\$152,596	\$87,196	\$4,359,851	21.1%
Builder Operator Training	\$12,000	\$9,000	\$21,000	\$0	\$192,000	\$6,000	\$240,000	1.2%
Energy Information Services	\$12,000	\$7,500	\$24,000	\$240,000	\$10,500	\$6,000	\$300,000	1.4%
Non-Residential Total	\$2,035,998	\$1,723,950	\$4,747,651	\$10,753,499	\$1,032,302	\$406,601	\$20,700,001	100.0%
Percent of Non-Residential Budget	9.8%	8.3%	22.9%	51.9%	5.0%	2.0%	100.0%	

Program	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Residential Budget
RESIDENTIAL								
Consumer Products	\$320,000	\$570,000	\$795,000	\$3,300,000	\$240,000	\$300,000	\$5,525,000	29.7%
Existing Home HVAC	\$220,000	\$394,238	\$518,498	\$1,620,000	\$293,000	\$540,000	\$3,585,736	19.3%
New Construction	\$312,513	\$873,750	\$997,000	\$3,400,000	\$306,000	\$300,000	\$6,189,263	33.3%
Low Income	\$225,000	\$15,000	\$150,000	\$2,865,000	\$30,000	\$15,000	\$3,300,000	17.7%
Residential Total	\$1,077,513	\$1,852,988	\$2,460,498	\$11,185,000	\$869,000	\$1,155,000	\$18,599,999	100.0%
Percent of Residential Budget	5.8%	10.0%	13.2%	60.1%	4.7%	6.2%	100.0%	

Program	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Total Budget
TOTAL								
Total Program Costs	\$3,113,511	\$3,576,938	\$7,208,149	\$21,938,499	\$1,901,302	\$1,561,601	\$39,300,000	81.9%
Percent of Total Budget	7.9%	9.1%	18.3%	55.8%	4.8%	4.0%	100.0%	

Total Program Costs	\$39,300,000	81.9%
Measurement, Evaluation & Research	\$3,900,000	8.1%
Performance Incentive	\$4,800,000	10.0%
TOTAL 2005-2007 DSM COST	\$48,000,000	100.0%

It should be noted that the budget details are based on estimations. APS indicated that it developed its budget allocations for its programs by reviewing DSM budget allocations from other jurisdictions and feedback from the DSM collaborative group. APS also indicated that the allocations were developed utilizing a top down approach because certain budget details are unknown at this time.

This document addresses only the Non-Residential programs listed in the top segment of Chart 1. This document does not address the residential programs, the performance incentive, or measurement evaluation and research. Other programs and budget elements not addressed here, unless previously addressed, will be evaluated at a later time. The following list outlines the order of major topics included in this document:

- General Description of Non-Residential Programs
- Cost-Benefit Analysis
- Schools Program
- Non-Residential Existing Facilities Program
- Non-Residential New Construction and Major Renovation Program
- Small Non-Residential Program
- Building Operator Training Program
- Energy Information Services Program
- Program Flexibility
- Staff's Analysis and Recommendations
- Summary of Recommendations

GENERAL DESCRIPTION OF NON-RESIDENTIAL PROGRAMS

The proposed Non-Residential programs would provide financial incentives and assistance to customers in order to encourage energy-efficient building design and the adoption of energy-efficient measures for non-residential customers. The Non-Residential programs address commercial, industrial, small business, and school facilities and include measures for new construction as well as for retrofitting existing structures.

The proposed measures included in the Non-Residential programs are generally classified as either prescriptive or custom efficiency measures. A measure refers to a single technology, such as an energy-efficient compact fluorescent lamp ("CFL") that can be used to reduce customer energy or demand requirements. The prescriptive measures are pre-defined, off-the-shelf measures that can be applied to a great number of customers. Prescriptive measures include the installation of efficient lighting fixtures; high-efficiency heating, ventilating, and air conditioning ("HVAC") systems; high-efficiency refrigeration equipment; high-efficiency motors; and building envelope measures such as cool roofs. The custom efficiency measures are designed specifically in response to a customer's individual needs and generally correspond to more complex applications not covered by the prescriptive measures. For consideration to participate in a custom efficiency measure, APS requires applicants to provide a feasibility study that estimates annual energy savings attributable to that measure in support of the incentive amount requested.

For all of the Non-Residential programs, an Implementation Contractor ("IC") would be hired to attend to the day-by-day details of program administration. The IC would be engaged in such activities as program design, administration, marketing, vendor and contractor referrals, application and incentive processing, participation tracking and reporting, and technical support.

The IC would verify the accuracy of customer data and program eligibility status, process and review customer applications, spot check forms for errors and discrepancies, double check calculations for estimated energy and demand savings, and receive paperwork and back-up invoices to prove a measure is in place. A single IC would be selected to perform these duties for the NR Existing, NR New, and NR Small programs. APS has indicated it would most likely utilize the State of Arizona Energy Office to serve as the IC for the Schools program. APS has indicated it would use the Electric League of Arizona ("ELA") in an IC role for its NR BOT program. APS will contract with an energy information services firm to serve as IC for the NR EIS program. APS has proposed that program monitoring and evaluation tasks would be handled by a single Monitoring and Evaluation Research contractor ("MER"). The MER would be a different contractor than the IC and would handle monitoring and evaluation tasks for all Non-Residential programs. APS indicated that the MER would also engage in certain quality control checks of IC activities.

Under the Non-Residential programs, APS would also provide educational and promotional efforts aimed at facility owners and operators to inform them about the benefits of energy-efficiency equipment, improved system performance, and integrated design. These efforts would include educational brochures, program promotional material, and website content. In addition, APS proposes to train contractors to provide quality installation of energy-efficient equipment and to maintain a list of commercial qualified contractors. Only those contractors that meet professional standards and complete APS' Commercial Qualified Contractor training requirements for installation and operation of high-efficiency systems would be included on the list. APS would refer contractors on this list to program participants wishing to have energy-efficient equipment installed.

The Commercial Qualified Contractor training would be provided by APS through the Electric League of Arizona ("ELA"). The training would be offered two times a year with APS providing an incentive of 50 percent of the cost of the training and the contractor paying the balance of the cost. The training program has not been developed yet, but would be modeled after the ELA's existing Residential Qualified Contractor Program. APS anticipates the training would consist of 12 courses, each consisting of three evenings of three hours of instruction, for a total of 108 hours of instruction. The ELA would provide the instructors, and the course materials would begin with existing ELA residential and small commercial materials with additional materials to be developed. Contractors would not be formally certified, but would be added to a referral list based upon successful completion of the course and meeting the professional standards of being in good standing with the Better Business Bureau and the Arizona Registrar of Contractors. APS has indicated that it is monitoring the development of a national EPS/DOE Energy Star certification standard for quality installation practices for possible use in the future.

APS would include information on each Non-Residential program in its semi-annual reports required by Commission Decision No. 67744.

In response to Staff inquiries concerning the origin and assembly plant locations for various energy-efficiency equipment, APS provided numerous articles and website content

discussing the matter. Staff reviewed these documents and generally concluded that both the conventional equipment and the energy-efficient alternatives are produced by multi-national corporations with facilities in many different countries, including the United States. The equipment is assembled with parts which are also produced in a wide array of countries.

COST-BENEFIT ANALYSIS

The Commission's 1991 Resource Planning Decision No. 57589 established that the Societal Cost Test should be used for the purposes of establishing whether a DSM program can be considered cost-effective. For each type of measure proposed by APS, the Company conducted a cost-benefit analysis utilizing the Societal Cost Test. Staff completed its own analysis of the costs and benefits also based on the Societal Cost Test.

Under the Societal Cost Test, the incremental benefits of a program to society must exceed the incremental cost of having the program in place in order for the program to be cost-effective. Societal costs include the customer's cost for installing the more energy-efficient measures and APS' costs for delivering the DSM program, excluding incentives. Societal benefits include APS' deferred generation capacity costs and avoided energy costs. Other benefits of a program include reduced water consumption and air pollution, although dollar values have not been assigned to those benefits.

It should be noted, however, that a cost benefit analysis such as the Societal Cost Test is based upon many assumptions and data from various sources. The end result of such an analysis can be no more accurate than the assumptions and data that have been utilized and is merely an estimation. APS is currently conducting a baseline study that is estimated to be completed sometime in February 2006¹. This baseline study will provide a basis for developing, supporting, and evaluating DSM programs. The study will also provide an analysis of load shapes by market segment, current efficiency levels by customer market segment, and local pricing information for conventional and energy-efficient measures.

Absent current baseline data, APS utilized data from various sources including, but not limited to, information from other states including California, APS' End Use Data Acquisition Project Study², and the U.S. Department of Energy for its energy savings per unit, incremental cost, and measure life analysis.

The inputs Staff utilized in its cost-benefit analysis include avoided capacity costs from the U.S. Energy Information Administration, hourly avoided energy costs generated by Staff's UPLAN production costing model, APS incremental costs, APS' estimates of measure life, and APS' estimate of demand and energy savings per unit adjusted for line losses. Staff calculated the total demand savings for each program by multiplying the demand savings per unit by the coincidence factor³ times the number of units expected to be part of the program. Staff calculated the total energy savings for each program by multiplying the kWh savings per unit of

¹ Approved in Commission Decision No. 67816 on May 5, 2005.

² 1997 study that investigated the end-use characteristics of APS non-residential market.

³ The likelihood that the measure is used at the time of the utility's system peak demand.

measure times the number of units times the measure life and summing the results of all measures in a program.

Staff estimates that the Non-Residential programs for three years could result in about \$50.4 million of net benefits to society over the lifetime of the measures. In addition, Staff estimates that the Non-Residential programs could reduce APS' annual peak demand by about 32.0 MW ("megawatts") and energy consumption by about 3.3 million MWh ("megawatt-hours") over the life of the measures. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 2
Non-Residential DSM
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget¹	Total Societal Costs²	Total Societal Benefits³	Net Societal Benefits⁴
Schools	\$1,680,000	\$1,962,186	\$2,351,398	\$389,212
Existing Facilities	\$6,760,075	\$16,610,136	\$37,430,032	\$20,819,896
New Construction & Major Renovation	\$7,360,075	\$14,945,504	\$29,160,752	\$14,215,247
Small	\$4,359,851	\$11,648,613	\$24,861,293	\$13,212,680
Builder Operator Training	\$240,000	\$864,675	\$1,912,281	\$1,047,606
Energy Information Services	\$300,000	\$354,000	\$1,047,820	\$693,820
Total	\$20,700,001	\$46,385,114	\$96,763,576	\$50,378,462
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

SCHOOLS PROGRAM

Program Concept

The Schools Program is proposed to reduce energy consumption in public school buildings including charter schools. The Schools Program would emphasize lighting upgrades, energy education, building operator training, and design assistance. All cost-effective energy-efficiency proposals would be considered by APS; however, APS believes that lighting upgrades may offer the best opportunity to conserve energy in public schools. APS indicated that it reached this conclusion after conferring with the Arizona Department of Commerce Energy Office ("Energy Office") and the Arizona Association of School Business Officials ("AASBO").

APS estimates that there are 1,400 public school sites and 280 charter school sites in its service area. Although APS did not provide a baseline study, it estimates that 40 percent of schools' electricity usage is for lighting and that 60 percent of existing lights in schools could be economically upgraded to be more energy-efficient.

The Schools Program is unique in that a fixed amount of money, set at \$1,680,000 over three years, is reserved exclusively for schools. Under APS' proposal, once these funds are depleted for a budget year, schools may participate in any other approved non-residential DSM programs for which a school would qualify. However, Staff is concerned that schools should not be required to utilize all of the school funding prior to being able to participate in other DSM programs. Staff sees no reason to limit schools from participating in other DSM programs before the Schools Program funding is expended. Staff anticipates that larger schools may choose to participate in other programs, such as the NR Existing and the NR New Programs, leaving more money in the Schools Program budget for smaller districts and charter schools. This would allow schools to take advantage of higher funding limits outside the schools program to undertake larger DSM projects. Therefore, Staff is recommending that schools be allowed to participate in any other non-residential DSM Program at any time, either before or after reaching the budget cap.

The degree of participation by schools in the Schools Program and other DSM programs would not be known until APS has had some experience with the programs. Staff is recommending that APS provide information about the level of school participation in all DSM programs in the 13-month filing that is being recommended by Staff.

Program Products and Services

DSM measures applicable to the Schools Program:

Lighting Measures

- Replace existing T12 lighting and magnetic ballasts with T8 fluorescents and electronic ballasts
- All additional lighting measures available under other non-residential programs

All Other Measures

- Measures from other Non-Residential programs are also available to the Schools Program including: HVAC, Refrigeration, Motors, Building Envelope, Custom Efficiency, and Design Assistance

A list of measures by program is provided in Exhibit 1 at the end of this document.

APS is proposing to employ an IC to assist them with the administration of some aspects of the Schools Program. APS has indicated to Staff that it will contract with the Energy Office to serve in this capacity. APS and its IC will work with the AASBO, the School Facilities Board, and the Arizona State Board for Charter Schools to pro-actively identify schools that are considering projects that might qualify for assistance under this program. The assistance would

include helping schools submit an application for funding, assessing the school property to determine the most viable energy-efficiency proposal, identifying and recommending capable contractors, and assisting in managing the design and implementation of the projects, as needed.

In addition to providing financial incentives for lighting upgrades and other cost-effective prescriptive measures, APS would provide educational and training materials to relevant school personnel to make them aware of energy-efficiency issues. APS would also provide direct training to school building operators and provide assistance to schools in identifying energy-saving opportunities.

APS states in response to Staff's discovery that the program monitoring and evaluation tasks will be performed by both the IC and the MER. The IC would perform routine invoice verification and related duties where the MER would be involved with energy usage benchmarking, measuring energy savings, and quality control activities in overseeing the work of the IC. The IC would authorize payment of incentives under the Schools Program upon completion of each energy-efficiency project. Before such payment is made, the IC will perform verification by checking all energy project-related invoices and verifying a representative sample of completed projects to ensure that the energy-efficient equipment and systems were installed. Field verification involving physical site inspection would be utilized for all larger custom efficiency projects. APS has indicated in response to Staff discovery that it will rely on feedback from the IC to define what constitutes a "larger" custom efficiency project.

APS' has proposed maximum limits for incentives of \$15/student per year or \$25,000 per school district per year, whichever is less. However, APS has also requested approval to provide funding in excess of the limits if there are insufficient applications to use all the available funds in a given budget year. Staff has concerns because the details of the manner in which an override of the Schools program cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC, which will not be hired until after this item is approved. Until the details of the manner in which the override would be administered can be provided and Staff is able to review customer participation levels in each program, Staff cannot recommend approval of APS' proposal to override the Schools program cap. Therefore, at this time, Staff is recommending that the incentive cap for all measures paid under the Schools program be set at \$15/student per year or \$25,000 per school district per year, whichever is less. Staff is also recommending that if, in the future, APS would like to provide for an override of the Schools Program incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

Staff has some concern about APS' plan to award funding to schools on a first-come, first-served basis, even though APS has indicated this policy was developed in collaboration with school representatives. Staff is concerned that the smaller districts and charter schools which do not have dedicated energy staffs may not be able to react as quickly as the larger districts. APS' proposed limits of \$15/student per year or \$25,000 per school district per year, whichever is less, should mitigate this problem somewhat by assuring that a small number of large districts will not use up all of the funds. In addition, Staff anticipates that its recommendation to allow schools to participate in other non-residential DSM programs, either before or after reaching the cap, would

free up more funding for smaller school districts and charter schools will also help mitigate the problem. However, without experience under the program, Staff is unable to make such a determination. Therefore, Staff is recommending that APS track the use of Schools Program funds by size of school entity and report such findings in its semi-annual DSM reports as well as in the 13-month filing recommended by Staff.

Budget and Societal Benefits

The budget for the Schools Program includes categories for planning and administration, marketing, implementation, rebates and incentives, training and technical assistance, and consumer education. For the first three years of the program, the budget is \$1,680,000 allocated as follows:

**Chart 3
APS' Schools Program Estimated Budget
2005-2007**

Year	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$40,000	\$7,000	\$13,000	\$338,000	\$50,000	\$7,000	\$455,000
2006	\$62,000	\$8,000	\$56,000	\$365,000	\$61,000	\$8,000	\$560,000
2007	\$62,000	\$10,000	\$56,000	\$455,000	\$72,000	\$10,000	\$665,000
Total	\$164,000	\$25,000	\$125,000	\$1,158,000	\$183,000	\$25,000	\$1,680,000
Percent of Budget	9.8%	1.5%	7.4%	68.9%	10.9%	1.5%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff finds no reason to disagree with APS' initial allocation for funding the Schools Program based upon the information provided by APS. However, Staff is recommending that APS continually assess opportunities to increase funding levels for schools based on feedback

from the DSM collaborative, school representatives and officials, and the results of overall program performance. APS should provide information about its efforts to increase funding for schools in APS' semi-annual reports and the 13-month filing that is being recommended by Staff. At that time, APS will have 12 months of experience under the Schools Program and, based on program performance, the funding level for schools can be reassessed at that time.

APS based its analysis of program costs and benefits as well as energy and peak load savings solely upon the T8 Lighting retrofit component of the Schools Program. Results of Staff's analysis confirm APS' conclusion that this is a cost-effective program.

According to Staff's analysis of the program for the first three years, the Schools Program lighting component alone could provide about \$389,000 in net benefits over the life of the measures and could reduce annual peak demand by about 304 MW and energy consumption by about 85,000 MWh over the life of the measures. To the extent that other cost-effective measures would be undertaken by schools in the Schools Program, additional savings could accrue. Staff's analysis of the benefits of the Schools Program is based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 4
Non-Residential Schools Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget ¹	Total Societal Costs ²	Total Societal Benefits ³	Net Societal Benefits ⁴
Schools	\$1,680,000	\$1,962,186	\$2,351,398	\$389,212
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

NON-RESIDENTIAL EXISTING FACILITIES PROGRAM

Program Concept

The NR Existing Program is designed to provide opportunities for energy savings in this sector of higher energy use customers. The NR Existing Program would provide incentives to qualifying owners and operators of existing large non-residential facilities for energy-efficiency improvements in lighting, HVAC, motors, and refrigeration applications. Under the program, APS would provide incentives to qualifying customers who adopt custom efficiency or prescriptive measures through the retrofit or replacement of equipment.

The NR Existing Program would be available for APS non-residential customer facilities having a monthly peak demand greater than 200 kW based on the past 12 months of billing

history. This category would typically include existing large offices, large retail establishments, large groceries, resorts and large hotels, colleges and universities, and inpatient healthcare facilities.

Under the program, APS would also provide incentives for retro-commissioning⁴ studies that use a systematic process to improve and optimize existing building operations. The NR Existing Program also proposes to increase the energy efficiency of large central HVAC systems through diagnosis, tune-up, and other initiatives recommended by the retro-commissioning study. The program would also provide educational and training materials to aid building and facility owners and operators in making decisions to improve the energy efficiency of their facilities. APS proposes to train, qualify, and promote the use of contractors that have met professional standards and completed APS' Commercial Qualified Contractor training for installation and operation of high-efficiency systems. The NR Existing Program also includes custom efficiency incentives to implement energy-efficiency measures not covered by the prescriptive measures.

Program Products and Services

Specific DSM measures proposed for the NR Existing Program:

Lighting Measures

- Replace less efficient fluorescent lighting and magnetic ballasts with energy-efficient T8 & T5 systems and electronic ballasts
- Replace less efficient incandescent lamps with energy-efficient CFLs
- Replace existing exit signs with energy-efficient LED exit signs
- Install daylighting controls and occupancy sensors
- Delamping – remove unneeded lighting fixtures or bulbs
- Replace outdoor lighting with high-efficiency sodium vapor fixtures

HVAC Measures

- Install energy-efficient air-cooled air conditioning units (packaged cooling)
- Install energy-efficient air-cooled chillers or water-cooled chillers
- Perform HVAC diagnostics, tune-up system, and repair any deficiencies found
- Provide for quality installation of HVAC equipment by referring a qualified contractor

Refrigeration Measures

- Replace existing refrigerators, freezers, and ice makers with high-efficiency units
- Replace refrigeration fan motors with high-efficiency evaporative units
- Add reach-in cooler controls, beverage case controls, and snack machine controls
- Install anti-sweat heater controls

⁴ Retro-commissioning refers to applying a systematic investigation process for optimizing a building's operations and maintenance. The intent is to optimize how equipment and systems operate individually and function together through diagnostic testing and tune-up activities.

- Install strip curtains and night covers

Motor Measures

- Install energy-efficient motors – 1 to 200 h.p.
- Install variable speed drives

Building Envelope Measures

- Cool roof applications to increase reflectivity

Custom Efficiency Measures

- Custom measures designed to exploit savings opportunities of specific customers

APS also proposes to undertake educational and promotional efforts to make facility and business owners and operators aware of the benefits offered by this program. These initiatives would include educational brochures, program promotional materials, and specific website content. The measures include both prescriptive measures, which carry prescribed incentives as listed in Exhibit 1 at the end of this document, and custom efficiency measures for which incentives are paid based upon estimated kWh savings attributable to the measure.

The custom efficiency measures lie outside the prescriptive measure definitions and are individually tailored by building owners and managers to take advantage of energy efficiencies specific to their building or facility. Incentives for these measures are paid one time only for estimated kWh energy savings at the rate of \$0.11 per annual kWh saved. The incentive is limited to 50 percent of the custom energy-efficiency measure's incremental cost. Each project is required to include a feasibility study that identifies the energy conservation measures and calculates estimated annual energy savings. The custom efficiency feasibility study must take the form of an energy simulation or analysis and requires review and approval from APS' IC in order to be eligible for an incentive. An additional incentive of up to 50 percent of the cost of the custom efficiency feasibility study would be available to assist the customer with the cost of performing the study, limited to a maximum incentive of \$10,000 for the study.

Incentives would also be provided for retro-commissioning studies covering up to 50 percent of the cost of the study, limited to a maximum incentive of \$10,000. Incentives for implementing custom efficiency measures identified by the retro-commissioning study would be paid based upon \$0.11/kWh saved annually.

APS is proposing to utilize an IC to administer many aspects of the NR Existing Program. The IC would be tasked to provide details of program design, administration, marketing, vendor and retro-commissioning contractor referrals, application and incentive processing, participation tracking and reporting, quality control, and technical support. The same IC employed to handle these tasks in the NR Existing Program would also be utilized in the NR New and NR Small programs. APS has indicated that it would hire the IC after Commission approval of this item.

APS states that the program monitoring and evaluation tasks will be performed by both the IC and the MER. The IC will perform routine invoice verification and related duties where the MER will be involved with energy usage benchmarking, measuring energy savings, and quality control activities in overseeing the work of the IC. One strategy for monitoring and evaluation of the NR Existing Program would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. APS states that this technique involves the MER earlier and results in more timely and accurate data at a lower cost.

Incentives in the NR Existing Program would only be paid after completion of the project(s) and verification has occurred. Verification involves checking invoices and the identification of a representative sample of measures that would be checked by the IC to determine if energy-efficiency measures have been installed. Field verification, involving physical site inspection, would be utilized for all larger custom efficiency projects. APS has indicated in response to Staff discovery that it will rely on feedback from the implementation contractor to define what constitutes a "larger" custom efficiency project.

Under APS' proposal, the DSM total incentive for all prescriptive and custom measures undertaken by a single customer⁵ would be capped at \$300,000 per customer per budget year. However, APS has requested to allow additional measures and to pay additional incentives over the cap to a customer if there are insufficient applications from other customers to use the funds budgeted for the NR Existing Program. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC, which will not be hired until after this item is approved. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR Existing program. Therefore, at this time, Staff is recommending that the incentive cap for all measures paid to any customer under the NR Existing Program be set at \$300,000 per budget year. Staff is also recommending that if in the future APS would like to provide for an override of the NR Existing incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

APS has included the possibility of third-party financing assistance as a future component of its NR Existing Program. APS has proposed to use DSM funds to defray the costs associated with this option. The purpose of such a program component would be to assist some municipal and local government agencies that lack capital to invest in energy-efficiency improvements. Until more details of this component of the program are developed and approved, Staff is recommending exclusion of third-party financing assistance from the NR Existing Program.

Budget and Societal Benefits

The budget for the NR Existing Program includes categories for planning and administration, implementation, incentives, consumer education, training and technical

⁵ "Customer" is defined by APS in this context as one or more sites, locations, or accounts controlled by a single decision maker. Normally, one "customer" will be comprised of those sites, locations, or accounts for which the electric bills are paid by a single entity.

assistance, and marketing. For the first three years of the program, the budget is allocated as follows:

**Chart 5
APS' Existing Facilities Estimated Budget
2005-2007**

Year	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$183,085	\$173,931	\$549,256	\$823,884	\$64,080	\$36,618	\$1,830,854
2006	\$225,336	\$214,069	\$563,340	\$1,126,679	\$78,868	\$45,067	\$2,253,359
2007	\$267,586	\$227,448	\$561,931	\$1,471,724	\$93,655	\$53,518	\$2,675,862
Total	\$676,007	\$615,448	\$1,674,527	\$3,422,287	\$236,603	\$135,203	\$6,760,075
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR Existing Program could provide an opportunity for significant savings of energy and demand by making incentives available to install energy-efficiency measures that may not otherwise be considered. According to Staff's analysis of the program for three years, the energy-efficiency measures expected to result from the NR Existing Program could provide about \$20.8 million in net benefits over the life of the measures. In addition, the NR Existing Program could reduce annual peak demand by about 10 MW and energy consumption by about 844,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR Existing Program is based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 6
Non-Residential Existing Facilities Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget¹	Total Societal Costs²	Total Societal Benefits³	Net Societal Benefits⁴
Existing Facilities	\$6,760,075	\$16,610,136	\$37,430,032	\$20,819,896
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

NON-RESIDENTIAL NEW CONSTRUCTION AND MAJOR RENOVATION PROGRAM

Program Concept

The NR New Program emphasizes integrated energy-efficient design and equipment selection early in the design process to improve the energy efficiency of non-residential new construction projects and major renovations. This program offers monetary incentives as well as design assistance and consultation to customers planning new non-residential facilities or major renovations. It relies heavily upon the custom efficiency measures, but also includes prescriptive measures for the installation of energy-efficient equipment for lighting, HVAC, motors, and refrigeration. Under the program, APS would provide incentives to qualifying customers who adopt integrated design efficiency measures through the specification of energy-efficient features and equipment.

The NR New Program is available for APS non-residential customers constructing facilities estimated to have a maximum monthly peak demand greater than 200 kW or customers planning major renovation projects of existing structures having a maximum monthly peak demand of 200 kW or more based on the past 12 months of billing history. This category would typically include large offices, large retail establishments, large groceries, resorts and large hotels, colleges and universities, and inpatient healthcare facilities.

The NR New Program relies heavily upon providing design incentives to cover the incremental resources involved to assess alternative design options that would improve the energy efficiency of the project through design assistance. According to APS, time and budget constraints on the design team are a significant market barrier to the design and construction of high-efficiency buildings. After enhanced design features have been identified, the NR New Program offers both prescriptive incentives for specific energy-efficiency measures and custom efficiency incentives for projects reaching beyond the standard prescriptive measures. It should be noted that a considerable amount of time can elapse between the design of a building and when the energy savings will actually be realized.

Program Products and Services

Specific DSM measures proposed for the NR New Program:

Design Assistance:

- Promote integrated design and integrated analysis of alternative high-efficiency design packages
- Assist the design team in examining alternative high-efficiency design packages through the provision of the design incentive

Common Measures:

- Train and qualify commercial contractors to meet APS' standards for installation and operation of high-efficiency systems

Custom Efficiency Measures:

- Encourage facility-specific efficiency features through custom incentives that are otherwise difficult to cover in a prescriptive program.
- Encourage the integrated system approach to incorporating energy-efficient improvements in new construction and major renovation projects.

Prescriptive Measures:

Lighting Measures

- Install fluorescent lighting with energy-efficient T8 & T5 systems and electronic ballasts
- Install energy-efficient CFLs
- Install energy-efficient LED exit signs
- Install daylighting controls and occupancy sensors
- Install outdoor lighting with high-efficiency sodium vapor fixtures

HVAC Measures

- Install energy-efficient, air-cooled air conditioning units (packaged cooling)
- Install energy-efficient, air-cooled chillers or water-cooled chillers
- Provide for quality installation of HVAC equipment by referring a qualified contractor

Refrigeration Measures

- Install high-efficiency refrigerators, freezers, and ice maker units
- Install refrigeration fan motors with high-efficiency evaporative units
- Add reach-in cooler controls, beverage case controls, and snack machine controls
- Install anti-sweat heater controls

- Install strip curtains and night covers

Motor Measures

- Install energy-efficient motors – 1.5 to 200 h.p.
- Install variable speed drives

Building Envelope Measures

- Cool roof applications to increase reflectivity

Under the Design Assistance measure provided in the NR New Program, APS would provide design incentives to cover APS consultation with the design team to include modeling of integrated design packages using building energy simulation models. APS would offer customers participating in the design assistance program an incentive covering up to 50 percent of incremental design costs. In addition, APS would provide incentives for commissioning studies. A commissioning study employs a systematic process to optimize a new building's operations and to ensure that the new building operates and performs as intended by the designer. Incentives for commissioning studies would cover up to 50 percent of the cost of the study with a limit of \$10,000 per study. The incentive for implementing commissioning study recommendations is based on a one-time payout on the estimated annual energy savings of the installed custom efficiency measures equal to \$0.11 per annual kWh saved.

The custom efficiency features of the NR New Program would provide for feasibility studies for more complex applications and a process for estimating proposed savings. The program features also include exploration and consideration of emerging energy-efficiency technologies already being utilized commercially in the marketplace.

The custom efficiency measures lie outside the prescriptive definition and are individually tailored by building owners and managers to take advantage of energy efficiencies specific to their project or facility. Incentives for these measures are paid one time only for estimated kWh energy savings at the rate of \$0.11 per annual kWh saved. The incentive is limited to 50 percent of the custom energy-efficiency measure's incremental cost. Each project is required to include a feasibility study that identifies the energy conservation measures and calculates estimated annual energy savings. This study must be an energy simulation or analysis and requires approval from APS or its IC. An incentive of up to 50 percent of the cost of the feasibility study is also available with a maximum incentive limit of \$10,000 for the custom efficiency study.

APS proposes to undertake educational and promotional efforts to assist facility and business owners and operators in making decisions to improve the energy efficiency of their project facilities. These efforts would consist of educational brochures, program promotional materials, and website content. As in the NR Existing Program, this program also proposes to qualify and refer contractors that have completed APS' Commercial Qualified Contractor training for installation and initial operation of high-efficiency systems.

The DSM total incentive for all prescriptive and custom measures undertaken by a single customer is capped at \$300,000 per customer per budget year. However, APS proposes to allow additional measures and to pay additional incentives over the cap if there are insufficient applications from other customers to use the funds budgeted for the NR New Program. APS has indicated that this provision would be implemented based on feedback from the IC and more details would be available after the IC is hired. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR New program. Therefore, at this time, Staff is recommending that the incentive cap for all measures paid to any customer under the NR New Program be set at \$300,000 per budget year. Staff also is recommending that if in the future APS would like to provide for an override of the NR New incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

APS is proposing to utilize an IC to administer many aspects of the NR New Program. These would include most day-to-day activities of the program including providing details of program design, program marketing, verifying customer eligibility, accepting applications from customers to participate, assisting with and verifying design studies and custom efficiency studies, vendor referrals, working with the MER to verify measures, technical support, record keeping, and incentive processing and payment. APS has indicated that the IC will be selected after Commission approval of the NR New Program using an RFP process. APS has already received bids from various contractors to serve as the IC.

APS states that the program monitoring and evaluation tasks will be performed by both the IC and the MER. The IC will perform routine invoice verification and related duties where the MER will be involved with energy usage benchmarking, measuring energy savings, and quality control activities in overseeing the work of the IC. One strategy for monitoring and evaluation of the NR New Program would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. APS has indicated that this technique involves the MER early in the process and results in more timely and accurate data at a lower cost. For example, energy-efficient design features of each project would be documented by the MER during the planning and design stages of the project.

Incentives in the NR New Program would only be paid after completion of the project(s) and verification has occurred. Verification involves checking invoices and the identification of a representative sample of measures that would be checked by the IC to determine if energy-efficiency measures have been installed. Field verification involving physical site inspection would be utilized for all larger custom efficiency projects. APS has indicated in response to Staff discovery that it will rely on feedback from the implementation contractor to define what constitutes a "larger" custom efficiency project.

Budget and Societal Benefits

The budget for the NR New Program includes planning and administration, implementation, incentives, consumer education, training and technical assistance, and marketing. For the first three years of the program, the budget is allocated as follows:

Chart 7
APS' New Construction and Major Renovation Estimated Budget
2005-2007

Year	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$199,335	\$189,369	\$598,006	\$897,009	\$69,767	\$39,868	\$1,993,354
2006	\$245,336	\$233,069	\$613,340	\$1,226,679	\$85,868	\$49,067	\$2,453,359
2007	\$291,336	\$247,636	\$611,806	\$1,602,349	\$101,968	\$58,267	\$2,913,362
Total	\$736,007	\$670,074	\$1,823,152	\$3,726,037	\$257,603	\$147,202	\$7,360,075
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR New Program could create an opportunity for significant savings of energy and demand by making incentives available to explore design features that may not otherwise be considered. The prescriptive measures could also create substantial savings for this class of customers by promoting the installation of energy-efficient equipment in new or renovated buildings. According to Staff's analysis of the program for three years, the energy-efficiency measures expected to result from the NR New Program could provide about \$14.2 million in net benefits over the life of the measures. In addition, the NR New Program could reduce annual peak demand by about 8.6 MW and energy consumption by about 719,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR New Program is

based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 8
Non-Residential New Construction & Major Renovation Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget ¹	Total Societal Costs ²	Total Societal Benefits ³	Net Societal Benefits ⁴
New Construction & Major Renovation	\$7,360,075	\$14,945,504	\$29,160,752	\$14,215,247
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

SMALL NON-RESIDENTIAL PROGRAM

Program Concept

The proposed NR Small Program is designed to increase energy efficiency of customers' facilities within the small non-residential customer segment. Under the NR Small Program, APS would provide prescriptive incentives to small non-residential customers for energy-efficiency improvements in lighting, HVAC, motors, and refrigeration applications. One program goal is to facilitate customer participation by making participation trouble-free for the NR Small customer. Toward that end, APS proposes to provide a one-source audit and installation referral service.

The NR Small Program would be available for APS' non-residential customers with a maximum monthly peak demand of 200 kW or less based on the past 12 months of billing history. This category would typically include restaurants, primary and secondary schools, small offices, small retail establishments, hotels, and outpatient healthcare facilities.

This program would promote a systems approach to improving the efficiency of small commercial HVAC systems by promoting (1) proper sizing of new air conditioning equipment, (2) staged air conditioning equipment, and (3) systems diagnostics and improvements that include air balancing, proper refrigerant charging, and duct sealing. The program also focuses on high-efficiency lighting, motors, and refrigeration systems. It proposes to further promote the whole system approach by cross-training, identifying, and referring energy-efficiency trained and qualified HVAC and lighting contractors.

Program Products and Services

Specific DSM measures proposed for the NR Small Program:

Lighting Measures

- Replace less efficient fluorescent lighting and magnetic ballasts with energy-efficient T8 & T5 systems and electronic ballasts
- Replace less efficient incandescent lamps with energy-efficient CFLs
- Replace existing exit signs with energy-efficient LED exit signs
- Install daylighting controls and occupancy sensors
- Delamping – removal of unneeded lighting fixtures or bulbs
- Replace outdoor lighting with high-efficiency sodium vapor fixtures

HVAC Measures

- Install energy-efficient, air-cooled air conditioning units (packaged cooling)
- Install energy-efficient, air-cooled chillers or water-cooled chillers
- Perform HVAC diagnostics, tune-up system, and repair any deficiencies found
- Provide for quality installation of HVAC equipment by referring a qualified contractor

Refrigeration Measures

- Replace existing refrigerators, freezers, and ice makers with high-efficiency units
- Replace refrigeration fan motors with high-efficiency evaporative units
- Add reach-in cooler controls, beverage case controls, and snack machine controls
- Install anti-sweat heater controls
- Install strip curtains and night covers

Motor Measures

- Install energy-efficient motors – 1 to 200 h.p.
- Install variable speed drives

APS proposes to undertake educational and promotional efforts through its IC to assist facility and business owners and operators in making decisions to improve the energy efficiency of their facilities. These efforts are designed to increase the awareness and knowledge of the commercial building ownership and the management community on the benefits of efficiency measures. Promotional efforts would include educational brochures, program promotional material, bill stuffers, media ads, and website content.

The NR Small program also proposes to train, qualify, and promote contractors that meet APS' standards for installation and operation of high-efficiency systems through their Commercial Qualified Contractor Program. This program is directed at increasing the availability of trained and qualified contractors and service technicians who can provide whole facility integrated energy-efficiency solutions including the systems approach to HVAC, state-of-the-art testing and diagnostic techniques, and the performance impacts of system problems such as leaking ductwork.

APS states that the program monitoring and evaluation tasks will be performed by both the IC and the MER. The IC will perform routine invoice verification and related duties where

the MER will be involved with energy usage benchmarking, measuring energy savings, and quality control activities in overseeing the work of the IC. Monitoring and evaluation would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. APS states that this technique involves the MER earlier and results in more timely and accurate data at a lower cost. The IC would examine invoices to verify some installations and would rely upon installation vendors to observe completed installations at the field site and to report such observations to verify other measures. Incentives under the NR Small Program would be paid only after completion of the energy-efficiency project has been verified.

Under APS' proposal, the total DSM incentive for all measures undertaken by a single customer would be capped at \$150,000 per customer per budget year. However, APS has requested to allow additional measures and to pay additional incentives over the cap to a customer if there are insufficient applications from other customers to use the funds budgeted for the NR Small Program. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC, which will not be hired until after this item is approved. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR Small program. Therefore, at this time, Staff is recommending that the incentive cap for all measures paid to any customer under the NR Small program be set at \$150,000 per budget year. Staff is also recommending that if, in the future, APS would like to provide for an override of the NR Small cap, it should provide such details in the 13-month filing that is being recommended by Staff.

APS has included the possibility of third-party financing assistance as a future component of its NR Small Program. APS proposes to use DSM funds to defray the costs associated with this option. The purpose of such a program component would be to assist some small business owners who lack the capital to invest in efficiency upgrades or choose to invest this capital in business-related purchases over energy-efficiency upgrades. Until more details of this component of the program are provided and approved, Staff is recommending exclusion of third-party financing assistance from the NR Small Program.

Budget and Societal Benefits

The budget for the NR Small Program includes categories for planning and administration, implementation, incentives, consumer education, training and technical assistance, and marketing. For the first three years of the program, the budget is allocated as follows:

Chart 9
APS' Small Non-Residential Program Estimated Budget
2005-2007

Year	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$118,079	\$112,175	\$354,238	\$531,357	\$41,328	\$23,615	\$1,180,792
2006	\$145,328	\$138,062	\$363,321	\$726,642	\$50,865	\$29,066	\$1,453,284
2007	\$172,577	\$146,691	\$362,413	\$949,176	\$60,403	\$34,515	\$1,725,775
Total	\$435,984	\$396,928	\$1,079,972	\$2,207,175	\$152,596	\$87,196	\$4,359,851
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR Small Program could create opportunities for savings of energy and demand by providing incentives for building owners and managers to adopt conservation measures. According to Staff's analysis of the program for three years, the NR Small Program could result in about \$13.2 million in net benefits over the life of the measures. In addition, the NR Small Program could reduce annual peak demand by about 12.3 MW and energy consumption by about 1,501,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR Small Program is based upon many assumptions and data from various sources and is only an estimation.

Chart 10
Non-Residential Small Non-Residential Program
Net Societal Benefits
(Staff's Three-year Estimate)

DSM Program	APS Estimated Budget ¹	Total Societal Costs ²	Total Societal Benefits ³	Net Societal Benefits ⁴
Small	\$4,359,851	\$11,648,613	\$24,861,293	\$13,212,680
¹ APS Estimated Budget ² Total Societal Cost ³ Total Societal Benefits ⁴ Net Societal Benefits	Includes APS' costs, including incentives paid to customers. Includes customer costs and APS costs excluding incentives. Includes deferred generation capacity costs and avoided energy costs, adjusted for losses. Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

BUILDING OPERATOR TRAINING PROGRAM

Program Concept

The NR BOT Program would provide subsidized training for building operators and facility maintenance technicians on energy-efficient building operations and maintenance practices. All commercial, industrial, and institutional building operators and maintenance technicians located in APS' service territory would be eligible for the NR BOT Program. The program is intended to help building operators and facility maintenance personnel better understand how their facilities use energy and how to better manage energy costs. APS states that participants would also learn how to gain efficiency by purchasing energy-efficient equipment, keeping such equipment maintained, and operating it correctly.

APS proposes to provide the training through a cooperative effort with the ELA. The ELA would provide the actual training and administer all program implementation which includes course scheduling, registration, payment, and other administration. The course would be offered at least twice per year. Each course would last eight weeks and consist of eight hours of training per week. The training and curricula would be delivered by industry experts from trade partners including ELA trainers.

It should be noted that this training is currently being offered by the ELA and that APS is currently supporting it by providing funding to the ELA on an annual basis. This program would continue APS' promotion of the training, but change the manner in which APS provides financial support to the ELA program. Under the NR BOT Program, APS would provide a portion of the program participants' tuition instead of direct funding to the ELA on an annual basis.

Program Products and Services

APS proposes to offer separate training classes for building operators and managers, and for building maintenance technicians. The training for building operators and managers would include instruction on operations and maintenance practices regarding HVAC, lighting, electrical

systems, and energy conservation. Building maintenance technician training would cover airflow control, refrigeration, electrical systems, and variable frequency drives. Training materials would include HVAC and electrical texts as well as Arizona Industries of the Future, Inc. CD software, course handouts, APS energy-efficient fact sheets, website links, and information on supplemental training seminars.

Courses would include selections from the ELA's Institute for Facility Management Education program offerings of educational programs that are designed for a wide range of facility management personnel including building operators, maintenance technicians, and managers of multi-facility complexes. According to APS, the curricula have been developed by industry practitioners, APS staff members and instructors, and educational committee members of the ELA and Arizona Heat Pump Council. The content of the courses is designed to promote operation and maintenance practices that would increase energy efficiency of commercial and industrial facilities. It would cover general utility rate concepts, preventative maintenance, how to perform an energy audit, how to create reports for management to justify energy-efficiency expenditures, and how to improve equipment-purchasing skills. The classes would also provide an opportunity to refer class participants to other APS DSM programs. APS has indicated that instructors at the ELA Institute for Facility Management Education include professional building energy managers of large facilities and trainers with an average of more than 25 years of experience.

APS would provide marketing and promotional efforts to make the NR BOT Program known to eligible participants. APS would utilize printed promotional materials, brochures, newsletters, customer communications, and website content. The ELA would participate in the promotional activities by reaching out to its industry contacts through its mailing list, industry newspapers, and industry trade show participation.

The strategy for monitoring and evaluation would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. It would also involve surveys of the students at the completion of the training to assess participant intentions to implement techniques learned in the training. Follow-up surveys would also be conducted later to identify energy-efficiency actions taken as a result of the training. Monitoring and evaluation activities would be performed by the MER.

The incentive proposed by APS for the NR BOT Program is up to 50 percent of the participant cost of training for Facility Maintenance Technician Training (full cost equals \$895) and the Building Operator Training (full cost equals \$1,195). APS indicated that the incentive could be less than 50 percent if the incentive were adopted at 50 percent of current full costs for the training and the costs subsequently escalated. In order to provide more cost certainty, Staff is recommending the incentives for the NR BOT Program be set at \$447.50 for the Facility Maintenance Technician Training (50 percent of \$895) and \$597.50 for the Builder Operator Training (50 percent of \$1,195) or 50 percent of the participant's cost, whichever is less. Staff also recommends that these incentives be paid to the ELA after verification that the participant completed all required course work.

Budget and Societal Benefits

The budget for the NR BOT Program includes categories for planning and administration, marketing, implementation, incentives, and training and technical assistance. For the first three years of the program, the budget is allocated as follows:

Chart 11

**APS' Builder Operator Training Program Estimated Budget
2005-2007**

Year	Planning and Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$3,250	\$2,437	\$5,688	\$0	\$52,000	\$1,625	\$65,000
2006	\$4,000	\$3,000	\$7,000	\$0	\$64,000	\$2,000	\$80,000
2007	\$4,750	\$3,563	\$8,312	\$0	\$76,000	\$2,375	\$95,000
Total	\$12,000	\$9,000	\$21,000	\$0	\$192,000	\$6,000	\$240,000
Percent of Budget	5.0%	3.8%	8.8%	0.0%	80.0%	2.5%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR BOT Program could create opportunities for savings of energy and demand by offering training classes to building operators and technicians and providing incentives to encourage participation. According to Staff's analysis of the program for three years, the NR BOT could provide about \$1.0 million in net benefits over the life of the measures. In addition, the NR BOT Program could reduce annual peak demand by about 643 kW and energy consumption by about 81,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR BOT Program is based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below.

Chart 12
Non-Residential Builder Operator Training Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget ¹	Total Societal Costs ²	Total Societal Benefits ³	Net Societal Benefits ⁴
Builder Operator Training	\$240,000	\$864,675	\$1,912,281	\$1,047,606
¹ APS Estimated Budget ² Total Societal Cost ³ Total Societal Benefits ⁴ Net Societal Benefits	Includes APS' costs, including incentives paid to customers. Includes customer costs and APS costs excluding incentives. Includes deferred generation capacity costs and avoided energy costs, adjusted for losses. Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

ENERGY INFORMATION SERVICES PROGRAM

Program Concept

The NR EIS Program would provide customers with a web-based energy information tool to give them feedback on the energy consumption and load profiles within their facilities. The program is designed to educate facility managers and operators about how and when energy is used at their facilities for the purpose of placing them in a more informed position to make energy-efficiency improvements. The program is available for large non-residential customers with a single metered site and a monthly peak demand greater than 200 kW based on the past 12 months of billing history. The services would be provided to large APS commercial, industrial, and institutional customers, and APS would provide an incentive of up to \$1,000 to the customer to cover a portion of the cost of the EIS system.

APS would issue a request for proposal to select an energy information services company to serve as the IC for this program. The selected IC would provide the needed equipment, software, and delivery of program products and energy information services offered by this program. This would not be the same IC utilized by the NR Existing, NR New, and NR Small Programs. APS would provide overall program administration for the NR EIS Program.

The technology employed by the NR EIS Program involves the installation of specialized metering equipment to automatically transmit interval load data to a central data collection point over telephone lines. The data are posted to a secured website that customers can access through the use of a password.

Program Products and Services

Through the NR EIS Program, customers would receive monthly usage and demand reports and other valuable usage data that could be analyzed to improve energy usage patterns,

reduce energy use, reduce demands during on-peak periods, and better manage their overall energy consumption.

The web-based interface provided by the NR EIS Program would provide energy managers a combination of tools to graphically analyze energy consumption, demand, and usage during various weather scenarios. It would also provide data to allow comparisons between multiple sites managed by the same operator and to compare against historical data.

APS will contract with an energy information services firm to serve as IC for the NR EIS program. The energy information service IC would provide training and technical assistance to customers to allow them to take full advantage of the program and the equipment installed at their facility. Program participants would be taught necessary skills to take advantage of the data provided by the system. They would learn how to download billing history information and create spreadsheets, charts, and graphs to assist them in identifying strategies to lower energy costs. They would also be taught basic utility rate concepts so they understand the basis for savings by reducing demand or energy consumption. They would also learn how to create reports to their management to justify energy-efficient capital expenditures that would result in energy bill savings.

Both APS and the energy information service IC would provide marketing and promotional efforts to make the NR EIS Program known to eligible participants. The target market would be large non-residential customers having facilities served with a single meter. APS would utilize printed promotional materials, brochures, and website content.

APS proposes to offer one-time incentives of up to \$1,000 per customer to install the equipment and become a program participant. This incentive would be the same even for larger customers installing more sophisticated equipment at a multi-metered site. APS, through its energy information services IC, would also offer assistance in utilizing the equipment to identify energy-efficiency upgrades to their facilities.

The strategy for monitoring and evaluation would involve integrated evaluation characterized by data being collected at the time of implementation rather than after the fact. APS states that this technique involves the MER at an earlier date and results in more timely and accurate data at a lower cost. APS or its MER would access the data provided by the EIS Program itself to observe consumption and demand patterns both before and after program participation to help them measure the impact of energy-efficient measures undertaken as a result of the program.

Budget and Societal Benefits

APS acknowledges that baseline data for this program in its service territory are not available at this time and will not be available until the baseline study currently underway is completed. APS has assumed a \$0.14/kWh per square foot savings estimate from the NR BOT program as a proxy until better data are available.

The budget for the NR EIS Program includes categories for planning and administration, implementation, incentives, consumer education, training and technical assistance, and marketing. For the first three years of the program, the budget is allocated as follows:

Chart 13
APS' Energy Information Services Program Estimated Budget
2005-2007

Year	Planning and Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total
2005	\$3,250	\$2,031	\$6,500	\$65,000	\$2,844	\$1,625	\$81,250
2006	\$4,000	\$2,500	\$8,000	\$80,000	\$3,500	\$2,000	\$100,000
2007	\$4,750	\$2,969	\$9,500	\$95,000	\$4,156	\$2,375	\$118,750
Total	\$12,000	\$7,500	\$24,000	\$240,000	\$10,500	\$6,000	\$300,000
Percent of Budget	4.0%	2.5%	8.0%	80.0%	3.5%	2.0%	100%
Budget Allocation Definitions							
Planning & Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination, and general overhead expenses.						
Program Marketing	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).						
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.						
Rebates & Incentives	Includes all dollars that go toward customer rebates and incentives.						
Training & Technical Assistance	Includes all dollars that are used for energy-efficiency training and technical assistance for Non-Residential program participants and contractors.						
Consumer Education	Includes dollars that are used to support general consumer education about energy-efficient improvements.						

Additional details regarding the budget for this program are included in Exhibit 2 at the end of this document.

Staff believes that the NR EIS Program could create opportunities for savings of energy and demand by providing incentives for building owners and managers to participate in the program. The data provided through the program combined with the skills taught to properly make use of it could result in more efficient use of energy by participants. According to Staff's analysis of the program for three years, the EIS Program could result in about \$694,000 in net benefits over the life of the measures. In addition, the NR EIS Program could reduce annual peak demand by about 357 kW and energy consumption by about 44,000 MWh over the life of the measures. Staff's analysis of the benefits of the NR EIS Program is based upon many assumptions and data from various sources and is only an estimation. A chart summarizing Staff's estimated net societal benefits is provided below:

Chart 14
Non-Residential Energy Information Services Program
Net Societal Benefits
(Staff's Three-Year Estimate)

DSM Program	APS Estimated Budget ¹	Total Societal Costs ²	Total Societal Benefits ³	Net Societal Benefits ⁴
Energy Information Services	\$300,000	\$354,000	\$1,047,820	\$693,820
¹ APS Estimated Budget	Includes APS' costs, including incentives paid to customers.			
² Total Societal Cost	Includes customer costs and APS costs excluding incentives.			
³ Total Societal Benefits	Includes deferred generation capacity costs and avoided energy costs, adjusted for losses.			
⁴ Net Societal Benefits	Total Societal Benefits minus Total Societal Costs over the life of the measure(s).			

PROGRAM FLEXIBILITY

Program Flexibility

In each of the Non-Residential programs, APS outlined its desire to review incentive levels and other program elements and to modify them, as needed, during the first year from the approval date of these programs and periodically thereafter. APS proposed to report any modifications resulting from such reviews in its mid-year and year-end reports so that Staff could monitor them.

On November 14, 2005, APS filed revised flexibility language. The issue of flexibility was further discussed at the DSM Collaborative working group meeting on November 15, 2005. Following the discussion and input from the DSM Collaborative, APS made additional changes to its flexibility language and filed an updated version with the Commission on November 21, 2005.

APS' November 21, 2005, filing states that it has provided estimates based on the best available information in the original filing, but that it anticipates flexibility would be needed within the DSM portfolio to maximize program effectiveness, to react to market conditions and customer responses, and to limit administrative costs.

After analyzing APS' November 21, 2005, flexibility request and consulting with APS about the intent of the flexibility language, Staff determined that APS was requesting flexibility to shift funding between any of the five budget categories within a given Non-Residential DSM program. The five budget categories are Planning and Administration, Program Marketing, Program Implementation, Rebates and Incentives, Training and Technical Assistance, and Consumer Education. APS proposed limits on this shifting of funds only with regard to the Planning and Administration category. For the Planning and Administration category, APS proposed to make "reasonable efforts" to limit the amounts expended to 10 percent of the total

funding for each program. Other than this single constraint, APS' request would allow shifting of funds between categories without limit.

APS' requested flexibility would also allow APS to shift up to 30 percent of budgeted funds between programs in the same sector (Residential or Non-Residential), but not across sectors, for a given budget year. APS states that no budget dollars would be shifted away from the Low Income Program, including special funding devoted to tribes, or from the Schools Program.

APS has not proposed a cap on incentive levels. APS has indicated that, as a general guideline, incentives would be set at or below 50 percent of incremental cost. However, APS would provide the Commission with written justification when incentive levels exceed 50 percent of the incremental cost of the measure. This filing would be informational in nature. It should be noted that APS has included several incentives in its Application that currently exceed 50 percent of incremental cost.

The Company has also requested the ability to change baseline efficiency levels and customer incremental costs to the extent that the Federal Energy Policy Act or other energy standards may change during the implementation of a DSM program.

Also included in APS' flexibility language is a provision that, for each program, dollars not spent in a given year would be automatically transferred (carried forward) to the next year's budget for the same program. All budget shifts and other program changes are to be reported in the semi-annual DSM reports submitted to the Commission explaining why the budget shifts and program changes were undertaken.

In addition to the provisions outlined above, APS would notify the Commission in writing of any budget changes that would result in a significant change to a program's cost-benefit ratio and in no case shall a budget change cause the cost-benefit ratio to be less than 1.0 (except for the Low Income Weatherization Program.) APS has also indicated that significant changes to the budget or programs would be discussed by the DSM Collaborative group.

All program budgets and plans outlined in the Portfolio call for a three-year program encompassing 2005, 2006, and 2007. It is clear that no DSM funds in the Non-Residential programs were expended in 2005. Staff believes that the portion of program flexibility allowing unused funds to roll forward into the next year is reasonable.

Staff is concerned with some aspects of the flexibility language and the open-ended nature of some of the shifting requested. Therefore, Staff has included some limitations to APS' flexibility in its recommendations.

STAFF'S ANALYSIS AND RECOMMENDATIONS

Cool Roofs

Staff conducted a Societal Cost Test of all measures included in the Non-Residential programs. All of the measures analyzed by Staff resulted in a positive net benefit to society except for the Cool Roofs measure which is a component of the NR Existing and NR New Programs.

The Cool Roofs measure in APS' analysis consists of two separate components to promote reflective roofing surfaces. The components are Reflective Membranes and Roof Coatings. The two are very different in terms of incremental cost and measure life. Based on research, Staff learned that membranes are not widely used in Arizona where foam roofs are preferred. Staff determined it would be more appropriate to treat membranes and roof coatings as two separate measures. For retrofit applications, Staff's analysis concluded that neither membranes nor roof coatings could be justified by its cost-benefit analysis. For new roofs or where a new coating is going to be applied regardless, Staff recommends that APS encourage customers to apply a white reflective surface and include such measures in its educational materials. However, the marginal cost for the highly reflective surface coatings over the standard surface is zero or negative. Therefore, Staff recommends that no incentives be paid for the Cool Roofs measure at this time.

Diagnostics and Tune-up

The System Diagnostics and Tune-up measure applies to the Schools Program, the NR Existing Program, and the NR Small program. It provides incentives for a service call to diagnose and tune up HVAC equipment and also covers any repairs which could include duct work, refrigerant charge, and airflow improvements required to allow the system to operate in the most efficient manner. APS has outlined an incentive payment scale based upon the tonnage rating of the HVAC equipment being diagnosed and tuned. Incentive levels proposed by APS are \$100 per ton for units 3 tons through 5 tons, \$75 per ton for units 6 tons through 15 tons, and \$50 per ton for units over 15 tons.

Staff is concerned that the method employed to determine incentive payments for the System Diagnostics and Tune-up measure may not accurately reflect the level of work that is actually being done by the HVAC contractor. This has the effect of paying the same incentive to a customer who needed only the diagnosis and refrigerant as would be paid to a customer who required system diagnosis, refrigerant, and duct work. Therefore, Staff recommends that the method for determining incentive payments for the System Diagnostics and Tune-up measure be set at 75 percent of the incremental cost of the system diagnosis, tune-up, and repair work that was performed.

Prescriptive and Custom Efficiency Measures

Customers may choose to adopt both prescriptive and custom efficiency measures to conserve energy within their facilities. Prescriptive measure incentives are paid at a pre-determined incentive payment per unit of the measure installed. Custom efficiency measures are paid at \$0.11 per kWh saved based upon estimated kWh savings calculated in the energy study or simulation required at the time of application for the incentive. In the event that both types of measures are employed in a facility, Staff recommends that APS take all steps necessary to ensure that the energy savings from the prescriptive measures is subtracted from the savings in the energy simulation or study for the custom efficiency measure, so that savings from prescriptive measures are not paid more than once.

Financing Assistance

APS has included the possibility of offering third-party financing assistance as a future component of the NR Existing and the NR Small Programs. The company proposes to use DSM funds to defray the costs associated with this option. The purpose of such a program component would be to assist customers that lack needed capital to invest in energy-efficiency improvements. Until more details of this component of the programs are developed and approved, Staff recommends exclusion of third-party financing assistance from the NR Existing Program and the NR Small Programs at this time.

Schools Program

The Schools Program is unique in that a fixed amount of money, set at \$1,680,000 over three years, is reserved exclusively for schools. Under APS' proposal, once these funds are depleted for a budget year, schools may participate in any other approved non-residential DSM programs for which a school would qualify. However, Staff is concerned that Schools should not be required to utilize all of the school funding prior to being able to participate in other DSM programs. Staff sees no reason to limit schools from participating in other DSM programs before the Schools Program funding is expended. Staff anticipates that larger schools may choose to participate in other programs such as the NR Existing and the NR New Programs leaving more money in the Schools Program budget for smaller districts and charter schools. This would allow schools to take advantage of higher funding limits outside the schools program to undertake larger DSM projects. Therefore, Staff recommends that schools be allowed to participate in any other non-residential DSM Program at any time, either before or after reaching the budget cap.

The degree of participation by schools in the Schools Program and other DSM programs would not be known until APS has had some experience with the program. Staff recommends that APS provide information about the level of school participation in all DSM programs in the 13-month filing that is being recommended by Staff.

Staff has some concern about APS' plan to award funding to schools on a first-come, first-served basis, even though APS has indicated this policy was developed in collaboration with school representatives. Staff is concerned that the smaller districts and charter schools which do not have dedicated energy staffs may not be able to react as quickly as the larger districts. APS' proposed limits of \$15/student per year or \$25,000 per school district per year, whichever is less, should mitigate this problem by assuring that a small number of large districts will not use up all of the funds. In addition, Staff anticipates that its recommendation to allow schools to participate in other non-residential DSM programs, either before or after reaching the cap, would free up more funding for smaller school districts and charter schools will also mitigate the problem. However, without experience under the program, Staff is unable to make such a determination. Therefore, Staff recommends that APS track the use of Schools Program funds by size of school entity and report such findings in its semi-annual DSM reports as well as in the 13-month filing recommended by Staff.

Staff finds no reason to disagree with APS' initial allocation for funding the Schools Program based upon the information provided by APS. However, Staff recommends that APS continually assess opportunities to increase funding levels for schools based on feedback from the DSM collaborative, school representatives and officials, and the results of overall program performance. APS should provide information about its efforts to increase funding for schools in APS' semi-annual reports and the 13-month filing that is being recommended by Staff. At this time, APS will have 12 months of experience under the Schools Program and, based on program performance, funding levels can be reassessed at that time.

Caps on Incentive Payouts

Schools Program: APS' has proposed maximum limits for incentives set at \$15/student per year or \$25,000 per school district per year, whichever is less. However, APS has also requested approval to provide funding in excess of the limits if there are insufficient applications to use all the available funds in a given budget year. Staff has concerns because the details of the manner in which an override of the Schools program cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC. Until the details of the manner in which the override would be administered can be provided and Staff is able to review customer participation levels in each program, Staff cannot recommend approval of APS' proposal to override the Schools program cap. Therefore, at this time, Staff recommends that the incentive cap for all measures paid under the Schools Program be set at \$15/student per year or \$25,000 per school district per year, whichever is less. Staff also recommends that if in the future APS would like to provide for an override of the Schools program incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

NR Existing and NR New Programs: Under APS' proposal, the DSM total incentive for all prescriptive and custom measures undertaken by a single customer would be capped at \$300,000 per customer per budget year. However, APS has requested to allow additional measures and to pay additional incentives over the cap to a customer if there are insufficient applications from other customers to use the funds budgeted for the NR Existing and NR New

Programs. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR Existing and NR New programs. Therefore, at this time, Staff recommends that the incentive cap for all measures paid to any customer under the NR Existing Program and the NR New Program be set at \$300,000 per budget year. Staff also recommends that if in the future APS would like to provide for an override of the NR Existing incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.

NR Small Program: The DSM total incentive for all prescriptive and custom measures undertaken by a single customer is capped at \$150,000 per customer per budget year. However, APS proposes to allow additional measures and to pay additional incentives over the cap if there are insufficient applications from other customers to use the funds budgeted for the NR Small Program. APS has indicated that this provision would be implemented based on feedback from the IC, and more details would be available after the IC is hired. Staff has concerns because the details of the manner in which an override of the cap would be administered have not been fully developed. APS has indicated that this provision would be developed and implemented based on feedback from the IC. Until the details of the manner in which the override would be administered can be provided, Staff cannot recommend approval of APS' proposal to override the cap in the NR Small program. Therefore, at this time, Staff recommends that the incentive cap for all measures paid to any customer under the NR Small program be set at \$150,000 per budget year. Staff is also recommending that if, in the future, APS would like to provide for an override of the NR Small cap, it should provide such details in the 13-month filing that is being recommended by Staff.

Incentives for Studies

APS has proposed a wide variety of studies including Design Assistance, Feasibility Studies for custom measures, and commissioning and retro-commissioning studies. Staff is concerned because the incentives for these studies which are set at 50 percent of incremental cost with a maximum limit of \$10,000 per study, could be paid to a customer and then the customer could for various reasons decide not to go ahead with the project. This would result in expending DSM dollars that would produce no societal benefit. While Staff anticipates that this would not occur often, Staff recommends that APS identify the number of instances that incentives were paid for studies for which associated projects were not completed through the verification process. This information should be provided in APS' semiannual reports and in the 13-month filing that Staff is recommending.

Refund of Incentives

Staff is concerned that customers could receive an incentive payment to install prescriptive or custom measures and not install the measures. This would result in expending DSM dollars that would produce no societal benefit. Therefore, Staff recommends that as part of

the application process or through a separate contract, APS require customers to acknowledge that the customer will install all applicable prescriptive or custom measures. Staff also recommends that where identified through the verification process, APS recover any incentives from the customers that were paid for measures that were not installed.

Building Operator Training

The incentive proposed by APS for the NR BOT Program is up to 50 percent of the participant cost of training for Facility Maintenance Technician Training (full cost equals \$895) and the Building Operator Training (full cost equals \$1,195). APS indicated that the incentive could be less than 50 percent if the incentive were adopted at 50 percent of current full costs for the training and the costs subsequently escalated. In order to provide more cost certainty, Staff recommends the incentives for the NR BOT Program be set at \$447.50 for the Facility Maintenance Technician Training (50 percent of \$895) and \$597.50 for the Builder Operator Training (50 percent of \$1,195) or 50 percent of the participant's cost, whichever is less. Staff also recommends that these incentives be paid to the ELA after verification that the participant completed all required course work.

Program Marketing

The Program Marketing budget category includes all expenses related to marketing the program and increasing DSM consumer awareness. APS estimates that the Program Marketing budget for three years would total approximately \$1.7 million. Many of APS' proposals, such as taking advantage of natural opportunities to promote energy-efficiency at the time customers are making energy-related purchase decisions, appear to be reasonable. However, the details surrounding all of APS' marketing strategies including the use of various contractors still need to be developed. Therefore, Staff recommends that, within 90 days after approval of this item, APS submit a detailed Marketing Plan for Staff review. The Marketing Plan should, at a minimum, include all Program Marketing budget items and their anticipated expenses, details on the division of marketing activities between APS and contractors, and the types of marketing pieces that APS plans to develop to promote the Non-Residential programs. Staff further recommends that APS provide copies of all marketing materials for Staff review within 30 days of the development of each piece.

Planning and Administration Expenses

The Planning and Administration budget varies by program; however, APS has indicated that it will make "reasonable efforts" to limit this budget category to 10 percent of the total funding for each program. Staff issued discovery to APS regarding the details of the Planning and Administration budget. The Planning and Administration budget category includes program management, oversight of the implementation contractor, program development, program coordination, and general overhead. APS estimates that the Planning and Administration budget for three years would total approximately \$2.0 million. In response to Staff discovery, APS was able to provide Staff with certain information regarding employee salaries. However, there are other Planning and Administration expense components that are unknown at this time. Due to a

lack of certainty and specificity, Staff does not feel that there is enough information available in order to recommend approval of the Planning and Administration Budget and its expense components at this time. Therefore, Staff recommends that APS not be allowed to recover Planning and Administration expenses at this time. APS could request approval of its Planning and Administration expenses in the 13-month filing that is being recommended by Staff. At that time, 12 months of actual expense data for the Planning and Administration category would be available.

Flexibility

Staff acknowledges that there are arguments both for and against flexibility. APS is not certain, for example, what level of incentive would cause customers to take action and adopt energy-efficiency measures. In addition, APS does not know which programs would achieve greater interest and market penetration and which ones would not. APS has indicated that flexibility is a key to implementing a successful program so that it can make adjustments to maximize the results of the DSM programs. However, Staff is concerned that too much flexibility for new programs could result in loss of the Commission's ability to monitor and provide valuable input regarding certain aspects of the program while it is being developed and implemented. Therefore, Staff has made a number of recommendations to put parameters around the flexibility that APS has requested. In addition, as previously discussed, Staff has recommended that APS return for approval of its non-residential programs within 13 months of a decision in this matter.

Some of the other justifications for program flexibility presented by APS have caused some concern on the part of Staff. For example, APS has indicated that the IC would bring program and technical knowledge that can be used to improve the program plans. APS has further indicated that certain program enhancements may require changes to the programs as they were originally presented to the Commission within the non-residential portion of the Application. APS has indicated to Staff that there are some program features in the Application that it cannot fully explain because the IC would help them to develop the details. Based on this, Staff is concerned about the transparency of certain aspects of the program that the Commission would be approving. For instance, as previously discussed, Staff is concerned about the manner in which the cap for incentives paid to customers would be administered.

APS has also indicated that flexibility would be important to make modifications to the DSM programs based upon the results of the baseline study currently underway and expected to be completed in February 2006. Staff believes certain inputs provided in this filing may be based on data from other regions and may not reflect actual Arizona-specific measures, savings, or cost data. Staff believes it would be important for APS to utilize the new baseline data when it becomes available.

APS has requested authority to adjust incentive levels, as needed, for all measures as long as APS provides written justification to the Commission when incentive levels move above 50 percent of the incremental cost of the energy-efficiency measure. APS has indicated that it has based its incentive levels on criteria such as customer payback periods and other customer

acceptance criteria. APS' current filing contains certain incentive levels that exceed 50 percent of incremental cost and in some cases equal 100 percent of incremental cost. Increasing an individual incentive could be helpful to make a measure or program more viable if customers are not responding to current levels of incentives. Likewise, it may become obvious that lower levels of incentives for a given measure or program could be offered without affecting the participation levels of popular energy-efficiency measures. In a previous Commission proceeding, Staff recommended that incentives not exceed 50 percent of incremental costs for the lighting portion of the Consumer Products Program. Staff made this recommendation to avoid the potential for excessive incentives. Staff is interested in assuring that incentive amounts are set at a level that is necessary to move the market toward installing energy-efficiency measures, but that excessive incentives beyond what is needed to move the market not be offered. Staff believes that an increased level of flexibility is reasonable due to the evolving nature of APS' programs and a lack of Arizona-specific data that will be provided in the future by the baseline study. Therefore, Staff recommends that all financial incentives be capped at a maximum of 75 percent of incremental cost. Staff further recommends that incentives that are proposed to be capped at 50 percent in APS' Application remain capped at 50 percent. These studies and training include the Commercial Qualified Training incentive, the custom efficiency measure incentive, the custom efficiency measure feasibility study incentive, the retro-commissioning study incentive, the commissioning study incentive, and the design assistance incentive.

APS has requested flexibility to directly shift budgeted funds into and out of the Program Planning and Administration category. APS has stated that it would make "reasonable efforts" to limit this budget category to 10 percent of the total funding for each program. Staff's interest in assuring that overhead for program and administrative costs remain at a minimum is to ensure that APS maximize the funds available for direct program expenses which will reduce demand and energy consumption, such as customer incentives. Staff recommends that Program and Administration costs for any given program, such as NR New, not exceed 10 percent of the total program budget.

While recognizing that individual incentives may need to be adjusted either upward or downward, Staff believes that overall budget expenditures for incentives and rebates should not increase significantly from the levels proposed by APS in its Application. Therefore, Staff recommends that the combined expenditure for Rebates and Incentives for the Non-Residential programs from 2005 to 2007 be capped at the current estimated level, which is 52 percent of the overall budget.

APS requested authority to shift up to 30 percent of the funding from one program to another program in the same sector, such as non-residential, per year. Such shifts would be made to take advantage of better performance in one program than another by shifting funds from the poorer performing program to the better performing program. It was agreed within the DSM collaborative group that 20 to 25 percent was a generally accepted shifting range within the industry. Therefore, Staff recommends that APS should be limited to shifting a maximum of 25 percent of budgeted funds from one program to another program in the same sector per calendar year.

APS used a weighted average analysis for each particular group of like measures in its cost-benefit analyses. In some cases, the group as a whole appears to be cost-effective, but certain individual measures within that group appear to not be cost-effective. Staff is concerned that providing an incentive to customers to purchase a product that is not cost-effective is not appropriate. Staff anticipates that some of the not cost-effective measures may actually be cost-effective when Arizona-specific data from the baseline study can be utilized. Therefore, Staff recommends that APS provide incentives only on individual measures that are cost-effective.

It is important that substantial changes in the Non-Residential programs do not occur after approval based upon flexibility language that may be granted in these programs. Therefore, Staff recommends that the nature of the incentives offered as well as the nature of the programs not be changed without Commission approval.

Staff recommends that APS inform the DSM Collaborative working group of progress and significant changes to budgets and/or incentives no later than four months after approval of the Non-Residential programs.

Interim Approval and 13 Month Filing

According to Staff's analysis of the programs for three years, the energy-efficiency measures expected to result from the six Non-Residential programs are estimated to provide about \$50.4 million in net benefits to society over the life of the measures. In addition, the Non-Residential programs are estimated to reduce annual peak demand by about 32.1 MW and energy consumption by about 3.3 million MWh over the life of the measures.

Staff recommends interim approval of APS' Non-Residential DSM programs (Schools, Non-Residential Existing Facilities, Non-Residential New Construction and Major Renovation, Small Non-Residential, Non-Residential Builder Operator Training, and Non-Residential Energy Information Services) with certain program modifications and requirements on an interim basis. Staff recognizes that the DSM Portfolio Plan as filed by APS outlines a work in progress. This is the first such comprehensive DSM study undertaken by APS in recent years, and Staff is aware that the details and sophistication of the programs will evolve as APS gains experience with them. APS has indicated that it will be relying upon future inputs to the program from the IC and from the results of the baseline study. These inputs as well as experience in implementing the programs will no doubt help APS to further develop the details of the Non-Residential programs. On balance, however, Staff finds that the benefits of moving forward with the Non-Residential programs at this time outweigh the benefits of waiting until the application can be further refined. In this manner actual savings from these programs can be realized earlier.

Implementing DSM programs of this size and scope is a new experience for APS and, in an effort to apprise the Commission of the results and ongoing design of the programs, Staff recommends that, within 13 months of a decision in this matter, APS should refile the Non-Residential portion of its DSM Portfolio Plan, with 12 months of actual data, for final Commission approval. Thirteen months was chosen because: 1) it will allow APS one month to

prepare its filing based on a full year of experience with the programs thus removing any seasonal variations, 2) the baseline study will have been completed and sufficient time for analysis of its findings will have passed, 3) a full year of actual charges against the various budget categories will have accrued, 4) enough time will have passed to give some indication of which programs are attracting participation and which are not, and 5) the IC will have had sufficient time to refine the details of some programs that are not fully developed at this time.

Staff recommends that the 13-month refiling of the Non-Residential DSM programs should include information on the status of the programs and explain changes that were made to budgets, incentive levels, and program implementation. In addition, APS should also file detailed information regarding its Planning and Administration budget and expenses for consideration at that time, detailed information about Schools Program participation and budget levels, schools participation in other Non-Residential DSM programs, and identify efforts that APS has made to increase the funding levels for the Schools program. The study should include Societal Cost Test analyses utilizing the new baseline data. At that time, the Commission would have the opportunity to make any adjustments or program changes deemed necessary which could include modifications to recommendations made in this proceeding.

SUMMARY OF RECOMMENDATIONS

1. Staff recommends interim approval of APS' Non-Residential DSM programs (Schools, Non-Residential Existing Facilities, Non-Residential New Construction and Major Renovation, Small Non-Residential, Non-Residential Builder Operator Training, and Non-Residential Energy Information Services) with certain program modifications and requirements described below on an interim basis.
2. Staff recommends that, within 13 months of a decision in this matter, APS should refile the Non-Residential portion of its DSM Portfolio Plan, with 12 months of actual data, for final Commission approval.
3. Staff recommends that the 13-month refiling of the Non-Residential DSM programs should include information on the status of the programs and explain changes that were made to budgets, incentive levels, and program implementation. The study should include Societal Cost Test analyses utilizing the new baseline data
4. For new roofs or where a new coating is going to be applied regardless, Staff recommends that APS encourage customers to apply a white reflective surface and include such measures in its educational materials. Staff also recommends that no incentives be paid for the Cool Roofs measure at this time.
5. Staff recommends that the method for determining incentive payments for the System Diagnostics and Tune-up measure be set at up to 75 percent of the incremental cost of the system diagnosis, tune-up, and repair work that was performed.

6. Staff recommends that APS take all steps necessary to ensure that the energy savings from the prescriptive measures is subtracted from the savings in the energy simulation or study for the custom efficiency measure, so that savings from prescriptive measures are not paid more than once.
7. Staff recommends exclusion of third-party financing assistance from the NR Existing and the NR Small Programs at this time.
8. Staff recommends that schools be allowed to participate in any other non-residential DSM Program at any time, either before or after reaching the budget cap.
9. Staff recommends that APS provide information about the level of school participation in all DSM programs in the 13-month filing that is being recommended by Staff.
10. Staff recommends that APS track the use of Schools Program funds by size of school entity and report such findings in its semi-annual DSM reports as well as in the 13-month filing recommended by Staff.
11. Staff recommends that APS continually assess opportunities to increase funding levels for schools based on feedback from the DSM collaborative, school representatives and officials, and the results of overall program performance. APS should provide information about its efforts to increase funding for schools in APS' semi-annual reports and the 13-month filing that is being recommended by Staff.
12. Staff recommends that the incentive cap for all measures paid under the Schools Program be set at \$15/student per year or \$25,000 per school district per year, whichever is less. Staff also recommends that if in the future APS would like to provide for an override of the Schools program incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.
13. Staff recommends that the incentive cap for all measures paid to any customer under the NR Existing Program and the NR New Program be set at \$300,000 per budget year. Staff also recommends that if in the future APS would like to provide for an override of the NR Existing incentive cap, it should provide such details in the 13-month filing that is being recommended by Staff.
14. Staff recommends that the incentive cap for all measures paid to any customer under the NR Small program be set at \$150,000 per budget year. Staff is also recommending that if, in the future, APS would like to provide for an override of the NR Small cap, it should provide such details in the 13-month filing that is being recommended by Staff.

15. Staff recommends that APS identify the number of instances that incentives were paid for studies for which associated projects were not completed through the verification process. This information should be provided in APS' semiannual reports and in the 13-month filing that Staff is recommending.
16. Staff recommends that as part of the application process or through a separate contract, APS require customers to acknowledge that the customer will install all applicable prescriptive or custom measures. Staff also recommends that where identified through the verification process, APS recover any incentives from the customers that were paid for measures that were not installed.
17. Staff recommends the incentives for the NR BOT Program be set at \$447.50 for the Facility Maintenance Technician Training (50 percent of \$895) and \$597.50 for the Builder Operator Training (50 percent of \$1,195) or 50 percent of the participant's cost, whichever is less. Staff also recommends that these incentives be paid to the ELA after verification that the participant completed all required course work.
18. Staff recommends that, within 90 days after approval of this item, APS submit a detailed Marketing Plan for Staff review. The Marketing Plan should, at a minimum, include all Program Marketing budget items and their anticipated expenses, details on the division of marketing activities between APS and contractors, and the types of marketing pieces that APS plans to develop to promote the Non-Residential programs. Staff further recommends that APS provide copies of all marketing materials for Staff review within 30 days of the development of each piece.
19. Staff recommends that APS not be allowed to recover Planning and Administration expenses at this time. APS could request approval of its Planning and Administration expenses in the 13-month filing that is being recommended by Staff.
20. Staff recommends that all financial incentives be capped at a maximum of 75 percent of incremental cost. Staff further recommends that incentives that are proposed to be capped at 50 percent in APS' Application remain capped at 50 percent. These studies and training include the Commercial Qualified Training incentive, the custom efficiency measure incentive, the custom efficiency measure feasibility study incentive, the retro-commissioning study incentive, the commissioning study incentive, and the design assistance incentive.
21. Staff recommends that Program and Administration costs for any given program, such as NR New, not exceed 10 percent of the total program budget.
22. Staff recommends that the combined expenditure for Rebates and Incentives for the Non-Residential programs from 2005 to 2007 be capped at the current estimated level, which is 52 percent of the overall budget.

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23. Staff recommends that APS should be limited to shifting a maximum of 25 percent of budgeted funds from one program to another program in the same sector per calendar year.
24. Staff recommends that APS only provide incentives on individual measures that are cost-effective.
25. Staff recommends that the nature of the incentives offered as well as the nature of the programs not be changed without Commission approval.
26. Staff recommends that APS inform the DSM Collaborative working group of progress and significant changes to budgets and/or incentives no later than four months after approval of the Non-Residential programs.

Ernest G. Johnson
Director
Utilities Division

EGJ:JDA:EAA

ORIGINATORS: Jerry Anderson and Erinn Andreasen

Examples of APS Proposed Prescriptive Incentives - Lighting

Equipment Type	Replace (for retrofit applications)	Incentive	Unit	Programs with Prescriptive Measures			
				Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
Standard T8 or T5 Electronic Ballast Fixtures 2-foot to 4-foot lamp 8-foot lamp	T12 magnetic ballast	\$ 5.00	per lamp	X	X		X
	T12 magnetic ballast	\$ 8.00	per lamp	X	X		X
Premium T8 Electronic Ballast Fixtures 2-foot to 4-foot lamp 8-foot lamp	T12 magnetic ballast	\$8.00	per lamp	X	X	\$1.50	X
	T12 magnetic ballast	\$10.00	per lamp	X	X	\$2.50	X
T5 F Electronic Ballast 1 lamp T5 (2' - 4') 2 Lamp T5 (2' - 4') 4 Lamp T5 HO F28	T12 magnetic ballast	\$3.00	per fixture			X	
	T12 magnetic ballast	\$7.00	per fixture			X	
	T12 magnetic ballast	\$75.00	per fixture	X	X	X	X
	Metal Halide						
Compact Fluorescent Lamps (CFL) Screw-In All Sizes	Incandescent	\$1.75	per lamp	X	X	X	X
Exit Signs (LED or Electroluminescent) Double or Single Face	Incandescent or CFL	\$25.00	per unit	X	X	X	X
Occupancy Sensors & Daylighting Controls All Sensor Mountings Daylighting Controls		\$40.00	per sensor	X	X	X	X
		\$100.00	per unit		X	X	X
Delamping	4 Lamp T12	\$7.00	per fixture	X	X		X
	4 Lamp T12	\$13.00	per fixture	X	X		X
	3 Lamp T12	\$7.00	per fixture	X	X		X
	2 Lamp T12	\$7.00	per fixture	X	X		X
	1 Lamp T8 or T5	\$7.00	per fixture	X	X		X
2 Lamp T8 or T5 3 Lamp T8 or T5 2 Lamp T8 or T5 1 Lamp T8 or T5	4 Lamp T8	\$3.00	per fixture	X	X		X
	4 Lamp T8	\$7.00	per fixture	X	X		X
	3 Lamp T8	\$3.00	per fixture	X	X		X
	2 Lamp T8	\$3.00	per fixture	X	X		X
Outdoor Lighting 1 Lamp T8 or T5	2 Lamp T8	\$3.00	per fixture	X	X		X
	2 Lamp T8	\$3.00	per fixture	X	X		X
CFL ≤ 26 W CFL > 26 W ≤ 55 W CFL > 55 W CFL Flood High Pressure Sodium High Pressure Sodium High Pressure Sodium	Incandescent	\$2.50	per fixture	X	X	X	X
	Incandescent	\$3.50	per fixture	X	X	X	X
	Incandescent	\$5.00	per fixture	X	X	X	X
	Halogen PAR	\$3.50	per fixture	X	X		X
	Halogen PAR	\$25.00	per fixture	X	X		X
Mercury Vapor	\$10.00	per fixture	X	X	X	X	
High Pressure Sodium	Metal Halide	\$10.00	per fixture	X	X	X	X

Examples of APS Proposed Prescriptive Incentives - HVAC and Building Envelope Measures

Exhibit 1
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Equipment Type/Measure	Size Category	Qualifying Efficiency	Qualifying Incentive	Unit	Additional Efficiency Incentive		Programs with Prescriptive Measures			
					Efficiency Incentive	Efficiency Incentive Details	Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
Air Cooled AC Units (Split System and Single Package Units)	<=5 Tons > 5 Tons <=10 Tons > 10 Tons	11.6 EER ¹ 11.4 EER 11.2 EER	\$50.00 \$50.00 \$25.00	per ton per ton per ton	\$30.00	per EER point over 11.6 per ton	X	X	X	X
					\$30.00	per EER point over 11.4 per ton	X	X	X	X
					\$30.00	per EER point over 11.2 per ton	X	X	X	X
Water Cooled Chillers	All Sizes < 150 Tons ≥150 Tons □	.61 kW/Ton 1.25 kW/Ton 1.25 kW/Ton	\$10.00 \$10.00 \$15.00	per ton per ton per ton	\$200.00	per kW/Ton under .61 per ton	X	X	X	X
					\$200.00	per kW/Ton under 1.25 per ton	X	X	X	X
Air Cooled Chillers	<=10 Tons > 10 Tons <=25 Tons > 25 Tons	NA NA NA	\$125.00 \$100.00 \$75.00	per ton per ton per ton	\$200.00	per kW/Ton under 1.25 per ton	X	X	X	X
					\$100.00	per kW/Ton under 1.25 per ton	X	X	X	X
					\$75.00	per kW/Ton under 1.25 per ton	X	X	X	X
Quality Installation	<=5 Tons > 5 Tons <=12.5 Tons > 12.5 Tons	NA NA NA	\$100.00 \$75.00 \$50.00	per ton per ton per ton	\$200.00	per kW/Ton under 1.25 per ton	X	X	X	X
					\$100.00	per kW/Ton under 1.25 per ton	X	X	X	X
					\$75.00	per kW/Ton under 1.25 per ton	X	X	X	X
Diagnostic Tune Up	<=5 Tons > 5 Tons <=12.5 Tons > 12.5 Tons	NA NA NA	\$100.00 \$75.00 \$50.00	per ton per ton per ton	\$200.00	per kW/Ton under 1.25 per ton	X	X	X	X
					\$100.00	per kW/Ton under 1.25 per ton	X	X	X	X
Programmable Thermostats	NA NA	NA NA	\$50.00 \$50.00	per unit per unit	\$200.00	per kW/Ton under 1.25 per ton	X	X	X	X
					\$50.00	per kW/Ton under 1.25 per ton	X	X	X	X
Cool Roofs ²	NA	NA	\$0.50	per Sq Ft	\$200.00	per kW/Ton under 1.25 per ton	X	X	X	X

¹EER refers to the energy efficiency rating of the unit. EER is the unit's BTU rating divided by its wattage.

² Both roof coatings and single membrane applications that have a minimum solar reflectance of 0.65 would be eligible.

Examples of APS Proposed Prescriptive Incentives - Motors

Horse Power ODP and TEFC	3600 RPM		1800 RPM		1200 RPM		Incentive/HP ¹	Programs with Prescriptive Measures			
	Open	Closed	Open	Closed	Open	Closed		Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
1	85.4%	77.6%	85.7%	85.0%	82.2%	82.7%	\$20.00	X	X	X	X
1.5	86.7%	85.1%	86.9%	87.2%	86.2%	87.3%	\$18.00	X	X	X	X
2	86.1%	86.1%	87.5%	87.4%	87.1%	88.1%	\$12.00	X	X	X	X
3	88.1%	87.6%	89.8%	89.7%	89.3%	89.0%	\$7.00	X	X	X	X
5	88.5%	89.5%	90.4%	90.2%	90.1%	90.0%	\$6.00	X	X	X	X
7.5	89.7%	90.5%	91.7%	91.5%	91.5%	91.4%	\$6.00	X	X	X	X
10	90.4%	91.7%	92.0%	91.8%	92.0%	91.7%	\$4.00	X	X	X	X
15	91.0%	91.8%	93.2%	92.7%	92.7%	92.5%	\$2.50	X	X	X	X
20	91.8%	92.1%	93.3%	93.3%	92.9%	92.5%	\$2.50	X	X	X	X
25	92.9%	92.9%	94.0%	93.8%	93.7%	93.4%	\$2.50	X	X	X	X
30	93.3%	92.7%	94.0%	93.9%	94.0%	93.7%	\$2.50	X	X	X	X
40	93.6%	93.4%	94.5%	94.6%	94.5%	94.3%	\$2.50	X	X	X	X
50	93.7%	93.9%	94.9%	94.9%	94.6%	94.4%	\$2.50	X	X	X	X
60	94.3%	94.3%	95.6%	95.2%	95.1%	94.9%	\$2.00	X	X	X	X
75	94.4%	94.5%	95.3%	95.4%	95.3%	94.9%	\$1.50	X	X	X	X
100	94.6%	94.8%	95.9%	95.5%	95.5%	95.1%	\$1.50	X	X	X	X
125	94.7%	95.2%	95.9%	95.4%	95.7%	95.1%	\$1.50	X	X	X	X
150	94.8%	95.5%	96.1%	95.8%	95.9%	95.9%	\$1.50	X	X	X	X
> 150	95.1%	95.7%	96.2%	96.3%	96.0%	95.8%	\$1.50	X	X	X	X
Variable Speed Drives											
All Sizes							\$50.00	X	X	X	X

¹Incentive levels for motors were revised by APS on November 10, 2005 and therefore do not match the original application.

Examples of APS Proposed Prescriptive Incentives - Refrigeration

Exhibit 1
Page 4 of 5

Equipment Type	Unit	Incentive per Unit	Programs with Prescriptive Measures			
			Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
Strip Curtains on Walk-Ins	Linear Foot	\$5.00	X	X	X	X
Night Covers	Linear Foot	\$10.00	X	X	X	X
Anti-Sweat Heater Controls	Door	\$200.00	X	X	X	X
Reach in Cooler Controls	Reach in Cooler	\$100.00	X	X	X	X
High Efficiency Ice Makers*	Ice Maker	\$50.00	X	X	X	X
High Efficiency Reach-in Freezer**	Freezer	\$75.00	X	X	X	X
High Efficiency Reach-in Refrigerators**	Refrigerator	\$75.00	X	X	X	X
High Efficiency Evap Fan Motors	Motor	\$15.00	X	X	X	X
PSC Motor	Motor	\$25.00	X	X	X	X
EC Motor	Motor	\$25.00	X	X	X	X
High Efficiency Vending Machines	Vending Machine	\$100.00	X	X	X	X
Beverage Case Controls	Vending Machine	\$25.00	X	X	X	X
Snack Machine Controls	Vending Machine	\$25.00	X	X	X	X

* Must meet the Federal Energy Management Program Recommended Efficiency levels of 110 lbs of ice per kWh.
 ** Must be Energy Star to qualify.

Examples of APS Proposed Incentives - Other Measures/Programs

Measure	Incentive per Project	Unit	Schools	Existing Facilities	New Construction and Major Renovation	Small Non-Residential
Design Assistance			X		X	
Large Office	\$10,000	average square feet				
College/University	\$7,500	average square feet				
Custom Measures	\$0.11	per estimated kWh saved	X	X	X	
Program	Participant					
Builder Operator Training	\$525					
Program	Participant					
Energy Information Services	\$1,000					

2005-2007 Non-Residential DSM - APS Estimated Budget

SCHOOLS

Program Area	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Budget
Lighting	\$164,000	\$25,000	\$125,000	\$1,158,000	\$183,000	\$25,000	\$1,680,000	100.0%

EXISTING FACILITIES

Program Area	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Budget
Lighting	336,084	305,977	832,509	1,701,428	117,630	67,218	3,360,846	49.7%
HVAC	79,220	72,123	196,235	401,050	27,726	15,844	792,198	11.7%
Refrigeration	37,509	34,149	92,914	189,892	13,129	7,502	375,095	5.5%
Motors	137,547	125,226	340,716	696,331	48,141	27,509	1,375,470	20.3%
Custom Efficiency	63,141	57,485	156,405	319,651	22,099	12,628	631,409	9.3%
Building Envelope	22,505	20,490	55,749	113,935	7,877	4,501	225,057	3.3%
Total	676,006	615,450	1,674,528	3,422,287	236,602	135,202	6,760,075	100.0%
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%		

NEW CONSTRUCTION AND MAJOR RENOVATION

Program Area	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Budget
Lighting	184,002	167,518	455,789	931,509	64,401	36,801	1,840,020	25.0%
HVAC	73,602	67,008	182,316	372,604	25,761	14,721	736,012	10.0%
Refrigeration	36,801	33,503	91,157	186,301	12,879	7,359	368,000	5.0%
Motors	147,201	134,015	364,630	745,208	51,521	29,439	1,472,014	20.0%
Custom Efficiency	220,803	201,023	546,946	1,117,812	77,280	44,160	2,208,024	30.0%
Design Efficiency	73,602	67,008	182,316	372,604	25,761	14,721	736,012	10.0%
Total	736,011	670,775	1,823,154	3,726,038	257,603	147,201	7,360,082	100.0%
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%		

SMALL NON-RESIDENTIAL

Program Area	Planning & Administration	Program Marketing	Program Implementation	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Total	Percent of Budget
Lighting	248,200	225,966	614,814	1,256,514	86,870	49,640	2,482,004	56.9%
HVAC	58,504	53,263	144,921	296,178	20,477	11,701	585,044	13.4%
Refrigeration	27,701	25,219	68,617	140,236	9,696	5,540	277,009	6.4%
Motors	101,579	92,480	251,620	514,246	35,553	20,316	1,015,794	23.3%
Total	435,984	396,928	1,079,972	2,207,174	157,596	87,197	4,359,851	100.0%
Percent of Budget	10.0%	9.1%	24.8%	50.6%	3.5%	2.0%		

*The totals on this exhibit do not sum exactly to the program totals included in Chart 1 of this memo. However, the differences are negligible.

BUILDER OPERATOR TRAINING

	<u>Planning & Administration</u>	<u>Program Marketing</u>	<u>Program Implementation</u>	<u>Rebates & Incentives</u>	<u>Training & Technical Assistance</u>	<u>Consumer Education</u>	<u>Total</u>	<u>Percent of Budget</u>
<u>Program Area</u>	<u>Administration</u>	<u>Marketing</u>	<u>Implementation</u>	<u>Incentives</u>	<u>Assistance</u>	<u>Education</u>	<u>Total</u>	<u>Budget</u>
Training	\$12,000	\$9,000	\$21,001	\$0	\$192,000	\$6,000	\$240,000	100.0%
Percent of Budget	5.0%	3.8%	8.8%	0.0%	80.0%	2.5%	100.0%	

ENERGY INFORMATION SERVICES

	<u>Planning & Administration</u>	<u>Program Marketing</u>	<u>Program Implementation</u>	<u>Rebates & Incentives</u>	<u>Training & Technical Assistance</u>	<u>Consumer Education</u>	<u>Total</u>	<u>Percent of Budget</u>
<u>Program Area</u>	<u>Administration</u>	<u>Marketing</u>	<u>Implementation</u>	<u>Incentives</u>	<u>Assistance</u>	<u>Education</u>	<u>Total</u>	<u>Budget</u>
Information Services	\$12,000	\$7,500	\$24,000	\$240,000	\$10,500	\$6,000	\$300,000	100.0%
Percent of Budget	4.0%	2.5%	8.0%	80.0%	3.5%	2.0%	100.0%	

	<u>Planning & Administration</u>	<u>Program Marketing</u>	<u>Program Implementation</u>	<u>Rebates & Incentives</u>	<u>Training & Technical Assistance</u>	<u>Consumer Education</u>	<u>Total</u>	<u>Percent of Budget</u>
<u>NON-RESIDENTIAL TOTAL</u>	<u>Administration</u>	<u>Marketing</u>	<u>Implementation</u>	<u>Incentives</u>	<u>Assistance</u>	<u>Education</u>	<u>Total</u>	<u>Budget</u>
Total	\$2,036,001	\$1,723,953	\$4,747,655	\$10,753,499	\$1,032,301	\$406,600	\$20,700,008	100.0%
Percent of Total Budget	9.8%	8.3%	22.9%	51.9%	5.0%	2.0%	100.0%	

APS Budget Category Definitions

<u>Planning and Administration</u>	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination and general overhead expenses
<u>Program Marketing</u>	Includes all expenses related to marketing the program and increasing DSM consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).
<u>Program Implementation</u>	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.
<u>Rebates & Incentives</u>	Includes all dollars that go toward customer rebates and incentives.
<u>Training & Technical Assistance</u>	Includes all dollars that are used for energy efficiency training and technical assistance for Non-Residential program participants.
<u>Consumer Education</u>	Includes dollars that are used to support general consumer education about energy efficient improvements.