



# OPEN MEETING AGENDA ITEM

*A subsidiary of Pinnacle West Capital Corporation*



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## ORIGINAL

September 1, 2005

Docket Control  
Arizona Corporation Commission  
1200 W. Washington  
Phoenix, Arizona 85007

RE: DOCKET NO. E-01345A-03-0437  
DECISION NO. 67744

Dear Sir/Madam:

Pursuant to A.C.C. Decision No. 67744, provided is the Semi-Annual report covering the period of January 1, 2005 through June 30, 2005.

If you should have any questions regarding the information contained herein, please call Angie Krainik at (602) 250-2611.

Sincerely,

Justin H. Thompson  
Manager  
Regulation, Policy & Analysis

JHT/AKK

Cc: Docket Control (Original, plus 13 copies)

AZ CORP COMMISSION  
DOCUMENT CONTROL

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## ARIZONA PUBLIC SERVICE COMPANY

### DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

Progress report includes the following information for the existing approved Low Income Energy Wise Assistance program and Market Transformation program, as well as proposed DSM programs, as specified in Decision No. 67744:

- A brief description of the program.
- Program modifications.
- Program goals, objectives, and savings targets.
- Programs terminated.
- The levels of participation.
- A description of evaluation and monitoring activities and results.
- kW and kWh savings.
- Benefits and net benefits, both in dollars, as well as performance incentive calculation.
- Problems encountered and proposed solutions.
- Costs incurred during the reporting period disaggregated by type of cost, such as administrative costs, rebates, and monitoring costs.
- Findings from all research projects.
- Other significant information.

A summary page detailing the program costs is also included.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

ACC Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	*Program Total Cost
<b>Residential</b>							
Low Income	\$112,263	-	\$1,746	\$20,830	-	\$49,668	\$184,507
Res Existing HVAC	-	\$18,487	\$62,676	\$112,708	\$151,793	\$35,779	\$381,443
Res New Const	\$15,766	-	\$75,992	\$130	\$60,224	\$57,964	\$210,076
Consumer Products	-	-	-	-	-	\$29,153	\$29,153
<b>Total for Residential</b>	<b>\$128,029</b>	<b>\$18,487</b>	<b>\$140,414</b>	<b>\$133,668</b>	<b>\$212,017</b>	<b>\$172,564</b>	<b>\$805,179</b>
<b>Non-Residential</b>							
Large Non Res Existing	-	-	-	-	-	\$38,575	\$38,575
Large Non Res New Const	-	-	-	-	-	\$42,199	\$42,199
Small Business	-	-	-	-	-	\$25,755	\$25,755
Bldg Operator Training	-	-	-	-	-	\$5,824	\$5,824
Energy Information Services	-	-	-	-	-	\$5,878	\$5,878
Schools	-	-	-	-	-	\$15,135	\$15,135
<b>Total for Non-Residential</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$133,366</b>	<b>\$133,366</b>
<b>Segment Totals</b>	<b>\$128,029</b>	<b>\$18,487</b>	<b>\$140,414</b>	<b>\$133,668</b>	<b>\$212,017</b>	<b>\$305,930</b>	<b>\$938,545</b>

<b>Program Costs</b>	<b>\$938,545</b>
<b>Meas, Eval, &amp; Research</b>	<b>\$14,956</b>
<b>Performance Incentive</b>	<b>-</b>
<b>TOTAL</b>	<b>\$953,501</b>

### **Definitions**

**Rebates & Incentives** - Includes dollars that go toward customer rebates and incentives, installation of low income weatherization and low income bill assistance.

**Training & Technical Assistance** - Includes all dollars that are used for energy efficiency training and technical assistance.

**Consumer Education** - Includes dollars that are used to support general consumer education about energy-efficient improvements.

**Program Implementation** - Program delivery costs associated with implementing the program - includes implementation contractor labor and overhead costs, as well as other direct program delivery costs.

**Program Marketing** - Includes all expenses related to marketing the program and increasing DSM consumer awareness (direct program marketing costs as opposed to general consumer education).

**Planning and Administration** - APS costs to plan, develop and administer programs- includes management of program budgets, oversight of the RFP process and implementation contractor, program development, program coordination and general overhead expenses.

\*Includes costs for existing approved programs as well as planning costs for proposed DSM portfolio plan and programs. All expenses other than Planning & Admin are for pre-approved programs. The table shows a summary roll-up of the cumulative spending for each program for the reporting period. The costs associated with the development of the programs listed in the proposed DSM Portfolio Plan, which was filed with the ACC on July 1, 2005, are also reflected in the table.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: LOW INCOME ENERGY WISE ASSISTANCE**

#### **Description**

APS' Energy Wise Low Income Assistance Program is designed to improve the energy efficiency, safety and health attributes of homes for customers whose income falls within the defined federal poverty guidelines. This program serves low income customers with various home improvements including cooling system repair and replacement, insulation, sunscreens, water heaters, window repairs and improvements as well as other general repairs. In addition, low income families are provided crisis bill assistance. The program is administered through various community action agencies throughout APS' service territory.

#### **Program Modifications**

Modifications were proposed to the Arizona Corporation Commission on June 3, 2005. The proposal would expand this program by opening it to rented homes, increase the allowed expenditure per home, allow the replacement of certain lights with compact fluorescent lamps (CFL), allow the replacement of certain refrigerators with energy-efficient models, and increase the total budget to \$1,100,000 per year. In addition, a portion of the total budget will be earmarked for Native American customers living on tribal lands.

#### **Program Goals, Objectives, and Savings Targets**

- To improve the energy efficiency of homes for customers whose income falls within the defined poverty guidelines.
- To provide customers information on energy management and conservation.
- To provide assistance in paying the electric bill for qualified customers in crisis situations.

#### **Programs Terminated**

None.

#### **Levels of Participation**

A total of 275 households received assistance during the reporting period, January through June 2005. Please note that a single household may have received more than one type of assistance.

Type of Assistance	Number of Households
Bill Assistance	198
Health and Safety	3
Repair and Replace	48
Weatherization	74

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### Evaluation and Monitoring Activities and Results

Weatherization measures must pass the cost effectiveness test that is detailed in the federal government's Weatherization Assistance Program (WAP) rules. These rules allow certain prescriptive measures which vary with the climate zone and type of housing construction. Measures not on the prescriptive list must be assessed by a computer analysis to determine the economic feasibility.

The Department of Commerce Energy Office with information from APS, is analyzing the electric energy used in weatherized homes before and after the weatherization measures are implemented. It takes a year of data before the weatherization and another year of data after the weatherization to get an accurate gauge of the impact of the measures. As the data base grows over time a more accurate picture of the impact of the weatherization activities will emerge.

Additionally, during the reporting period, APS filed for and received approval from the ACC, to proceed with a DSM baseline and market potential study. As part of the study, information will be gathered related to low income households and their awareness of energy efficiency.

### kW and kWh Savings

Of the 275 households participating in the program, a total of 122 homes received weatherization and/or repair & replace services that contributed to the energy savings.

Savings		
Homes	kW	kWh
122	36.6	243,756

The kW and kWh factors are based on data from the Department of Commerce Energy Office study of 150 weatherized homes. The homes were located in four different climate zones throughout the state and were representative of low income homes receiving weatherization assistance. Most homes received funding from multiple sources. The measures evaluated include duct sealing, infiltration remediation, attic insulation, shade screens and HVAC equipment replacement. The average cost per home was \$1,815.

The study normalized electric and gas savings into dollars with gas savings being about 10% of the total. The present value of the dollar savings was converted to "equivalent kWh" at 8 cents per kWh.

The annual energy and demand savings per home in this study are estimated to be 1,998 "equivalent kWh" and 0.3 kW.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### Benefits and Net Benefits/Performance Incentive Calculation

Benefits		
Homes	Benefits*	Net Benefits**
122	\$130,906	\$(50,508)

\*Benefits are as calculated by the TRC test and are the APS avoided costs. Benefits do not include those attributable to bill assistance.

\*\*Net benefits are based on the APS avoided cost as calculated by the TRC test and are the benefits, less the weatherization and administrative costs. Please note that the low income program is expected to have negative net benefits.

### Problems Encountered and Proposed Solutions

No problems encountered.

### Costs Incurred

Costs incurred for this program during the first half of 2005 are listed below:

Activity	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Bill Assistance	\$33,658	-	-	-	-	-	\$33,658
Health & Safety	\$457	-	-	-	-	-	\$457
Repair and Replace	\$14,295	-	-	-	-	-	\$14,295
Weatherization	\$63,853	-	\$1,258	-	-	-	\$65,111
3rd Party Manager Arizona Community Action Association	-	-	-	\$20,830	-	-	\$20,830
APS Program Support	-	-	\$488	-	-	\$49,668	\$50,156
Total	\$112,263	-	\$1,746	\$20,830	-	\$49,668	\$184,507

### Findings From All Research Projects

No research projects were undertaken.

### Other Significant Information

No items to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: RESIDENTIAL EXISTING HOMES HVAC**

#### **Description**

The residential existing home HVAC program promotes energy-efficient equipment and proper installation and maintenance of residential heating and air conditioning systems. The program provides training and technical assistance for HVAC contractors and education for consumers about the benefits of energy-efficient heating and cooling systems. Through the APS Qualified Contractor program, APS provides customer referrals to contractors who meet strict program requirements for professional standards, technician training and customer satisfaction.

#### **Program Modifications**

On July 1, 2005 APS filed a DSM Program Portfolio Plan with the Arizona Corporation Commission which includes 10 proposed programs, including an expanded and modified residential HVAC program. The proposed HVAC program design builds on the existing APS Qualified Contractor program, and offers financial incentives to encourage upgrades to quality-installed high-efficiency equipment ( $\geq 14$  SEER/12 EER) that meets US EPA/DOE Energy Star® energy-efficiency standards. Incentives are also proposed for home performance testing and repairs (such as sealing duct leaks) to improve energy efficiency.

#### **Program Goals, Objectives and Savings Targets**

The current program is a market transformation effort with long term goals to improve the market for energy-efficient HVAC systems by reducing market barriers to adoption of greater efficiency levels. For HVAC contractors, the program provides training and technical assistance to help contractors sell energy efficiency and deliver quality installation and repairs. For consumers, APS provides education to help customers better understand how to improve the energy efficiency of their home's heating and cooling system.

The proposed program modification filed on July 1, 2005 includes revised program objectives and estimated savings.

#### **Programs Terminated**

No programs were terminated during the first half of 2005.

#### **Levels of Participation**

In the first half of 2005:

- There are currently 53 contractors participating in the APS Qualified Contractor program. According to Arizona Heat Pump Council estimates, participating contractors make more than 150,000 household visits annually within the APS service territory.
- Approximately 180 HVAC technicians participated in APS sponsored training courses in order to meet APS Qualified Contractor program training requirements.
- APS Qualified Contractors provided over \$60,000 in co-op advertising dollars to support APS program messages.
- APS provided over 3,400 referrals to customers seeking HVAC service, repair or replacement of their home HVAC system.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

- APS distributed more than 5,000 copies of the Consumer's Guide to an Energy Efficient AC System. Many of these guides were distributed in response to a bill insert offering a free consumer guide that ran in Spring 2005.
- APS distributed two issues of the Southwestern Home Journal with a total reach of more than 250,000 customers. The Journals included articles about home energy efficiency, including the benefits of AC system maintenance and why it is important to select a qualified professional contractor.
- There were more than 6,230 unique user visits to the APS Energy Survey home energy audit at aps.com.

### Evaluation and Monitoring Activities and Results

In the first half of 2005, APS filed for approval to proceed with a DSM baseline and market potential study. The study was approved by the ACC in Decision No. 67816. As part of this research, the study will document the current state of the market for residential HVAC systems, level of energy-efficiency awareness among consumers and trade allies, typical SEER levels of replacement equipment, and current installation practices.

### kW and kWh Savings

As part of the current market transformation effort, kW and kWh savings are not quantified. The program plan that APS filed on July 1, 2005 includes estimated savings for the proposed program.

### Benefits and Net Benefits/Performance Incentive Calculation

As part of the current market transformation effort, program benefits and net benefits are not currently quantified and performance incentives are not calculated. The program plan that APS filed on July 1, 2005 includes estimates of program benefits/net benefits and calculates estimated program performance incentives.

### Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

### Costs Incurred

Costs incurred for this program during the first half of 2005 are listed below:

ACC Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Res Existing HVAC	-	\$18,487	\$62,676	\$112,708	\$151,793	\$35,779	\$381,443

### Findings from all Research Projects

No research projects were undertaken.

### Other Significant Information

No other significant information to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: RESIDENTIAL NEW HOME CONSTRUCTION**

#### **Description**

This program promotes high efficiency construction practices for new homes. The program emphasizes the whole building approach to improving energy efficiency and includes field testing of homes to ensure performance. Participating builders are trained to apply building science principles to assure that high-efficiency homes also have superior comfort and performance. The program also provides education for prospective homebuyers about the benefits of choosing an energy-efficient home and the features to consider.

#### **Program Modifications**

On July 1, 2005 APS filed a DSM Program Portfolio Plan with the Arizona Corporation Commission which includes 10 proposed programs, including an expanded and modified residential new construction program. The proposed program design builds on the existing APS Performance Built Homes program. To encourage builders to meet program energy efficiency standards, APS proposes to provide financial incentives to builders of \$400 per home (this represents approximately 50% of a builder's incremental cost for building to program standards). In addition, EPA/DOE Energy Star® home efficiency levels are set to increase on January 1, 2006. This program will be based on the new more stringent Energy Star® standard. The program will encourage builders to exceed Energy Star® standards whenever possible, including working with builders who offer guaranteed heating and cooling costs as a component of their new home energy efficiency warranty.

#### **Program Goals, Objectives and Savings Targets**

The rationale for this program is that the pace of residential new construction in the APS service territory, particularly the Phoenix metro area, is one of the biggest drivers of APS' system load growth. It is much easier and more cost-effective to work with builders to implement energy efficiency at the time of construction rather than attempt to retrofit efficiency after a home has been built. For many new home measures such as building envelope improvements, the benefits of energy efficiency upgrades will be sustained for the life of the home to produce very cost-effective savings. The program objective is to increase the penetration of homes built to high efficiency standards.

The current program is a market transformation effort with long term goals to improve the market for energy-efficient new homes by reducing market barriers to adoption of greater efficiency levels. The proposed program modification filed on July 1, 2005 includes revised program objectives and estimated savings.

#### **Programs Terminated**

No programs were terminated during the first half of 2005.

#### **Levels of Participation**

- In the first half of 2005, APS signed up 376 new homes to be built to program standards.
- There are currently 10 Arizona homebuilders and 72 subdivisions participating in the program.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

- APS distributed over 20,000 Homebuyer's Guides to Energy Efficiency to provide consumer education about energy efficiency features to consider when shopping for a new home.
- APS is currently planning a week or more of building science training to be conducted with builders and subcontractors in October/November 2005.

### **Evaluation and Monitoring Activities and Results**

Program standards require independent performance testing with a minimum of 15% of all homes randomly tested and inspected to ensure that performance is achieved in the field.

In the first half of 2005, APS filed for approval to proceed with a DSM baseline and market potential study. The study was approved by the ACC, Decision No. 67816. As part of this research, the study will document the current state of the market for residential new construction, including the level of energy efficiency awareness among builders and homebuyers, typical efficiency levels, and current installation practices.

In addition, APS will leverage results of ongoing EPA/DOE sponsored study of Phoenix area new homes. APS is a partner in this study of thousands of local standard and energy-efficient homes. Results of this study will be available by the end of the year.

### **kW and kWh Savings**

As part of the current market transformation effort, kW and kWh savings are not quantified. The program plan that APS filed on July 1, 2005 includes estimated savings for the proposed program.

### **Benefits and Net Benefits/Performance Incentive Calculation**

As part of the current market transformation effort, program benefits and net benefits are not currently quantified and performance incentives are not calculated. The program plan that APS filed on July 1, 2005 includes estimates of program benefits/net benefits and calculates estimated program performance incentives.

### **Problems Encountered and Proposed Solutions**

The Phoenix Metro region is currently the number one new housing market in the country. In the face of tremendous buyer demand and intense building activity it is difficult to encourage builders to make changes in construction practices. In addition, incremental costs for builders to meet program standards can be significant. To encourage builder participation and help cover incremental construction costs, APS proposes that builder incentives should be provided as mentioned above in the program modifications section.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### Costs Incurred

Costs incurred for this program during the first half of 2005 are listed below:

ACC Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Res New Const	\$15,766	-	\$75,992	\$130	\$60,224	\$57,964	\$210,076

### Findings from all Research Projects

No research projects were undertaken.

### Other Significant Information

No other significant information to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: CONSUMER PRODUCTS PROGRAM**

#### **Description**

This proposed program was filed with the ACC for approval on June 10, 2005. As proposed, this program would promote high-efficiency EPA/DOE Energy Star® approved lighting and appliances. Qualified products include Energy Star® clothes washers, refrigerators and freezers, dishwashers and Compact Fluorescent Lamps (CFL's). The proposed program will offer discounts on CFL's at local retail locations through cooperative agreements with retailers and lighting manufacturers. The proposed appliances portion of the program would offer consumer education and point of sale information about the benefits of purchasing Energy Star® qualified appliances.

In Decision No. 68064, the ACC approved the lighting component of the Consumer Products program. APS will continue to work with ACC staff and the DSM collaborative to analyze opportunities for improving the cost-effectiveness of the appliances component of the program and reintegrating appliances into the Consumer Products program.

#### **Program Modifications**

Not applicable. This program has not yet been implemented.

#### **Program Goals, Objectives and Savings Targets**

The proposed program goals, objectives and savings targets are identified in the proposal are awaiting ACC approval.

#### **Programs Terminated**

Not applicable. This program has not yet been implemented.

#### **Levels of Participation**

Not applicable. This program has not yet been implemented.

#### **Evaluation and Monitoring Activities and Results**

In the first half of 2005, APS filed for approval to proceed with a DSM baseline and market potential study. The study was approved by the ACC, Decision No. 67816. As part of this research, the study will document the current state of the market for energy-efficient lighting and appliances, including the level of energy efficiency awareness among consumers and retailers, and the amount of shelf space devoted to energy-efficient products.

#### **kW and kWh Savings**

Not applicable. This program has not yet been implemented.

#### **Benefits and Net Benefits/Performance Incentive Calculation**

The program plan that APS filed on June 10, 2005 includes estimates of program benefits/net benefits and calculates estimated program performance incentives. This program has not yet been implemented, so no benefits have been achieved at this point.

#### **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

**ARIZONA PUBLIC SERVICE COMPANY**

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:  
JANUARY THROUGH JUNE 2005**

**Costs Incurred**

Costs incurred for this program during the first half of 2005 are listed below:

<b>ACC Program</b>	<b>Rebates &amp; Incentives</b>	<b>Training &amp; Technical Assistance</b>	<b>Consumer Education</b>	<b>Program Implement</b>	<b>Program Marketing</b>	<b>Planning &amp; Admin</b>	<b>Program Total Cost</b>
Consumer Products	-	-	-	-	-	\$29,153	\$29,153

**Findings from all Research Projects**

No research projects were undertaken.

**Other Significant Information**

No other significant information to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: NON-RESIDENTIAL PROGRAM FOR EXISTING FACILITIES**

#### **Description**

This proposed program was filed for approval on July 1, 2005. The proposed program provides prescriptive incentives for owners and operators of large non-residential facilities for energy efficiency improvements in lighting, HVAC (heating, ventilation, and air conditioning), motors, and refrigeration applications. The program also provide subsidies for covering the cost of a retro-commissioning study that uses a systematic process to improve and optimize an existing building's operations and to support those improvements with enhanced documentation and training. The program provides educational and promotional pieces designed to assist facility and business owners and operators in making decisions to improve the energy efficiency of their facilities and promotes contractors that have gone through commercial qualified contractor training and meet APS' standards for installation and operation of high efficiency systems. For DSM applications not covered through the prescriptive incentives, the program provides custom efficiency incentives to implement energy efficiency measures that are evaluated on a case-by-case basis.

#### **Program Modifications**

Not applicable. This program has not yet been approved.

#### **Program Goals, Objectives and Savings Targets**

The proposed program filed on July 1, 2005 includes program objectives and estimated savings.

#### **Programs Terminated**

Not applicable. This program has not yet been approved.

#### **Levels of Participation**

Not applicable. This program has not yet been approved.

#### **Evaluation and Monitoring Activities and Results**

In the first half of 2005, APS filed for approval to proceed with a DSM baseline and market potential study. The study was approved by the Decision No. 67816. As part of this research, the study will document the current state of the market for energy efficiency in existing non-residential facilities and the potential for energy efficiency improvements in this customer segment.

#### **kW and kWh Savings**

Not applicable. This program has not yet been approved.

#### **Benefits and Net Benefits/Performance Incentive Calculation**

The program plan that APS filed on July 1, 2005 includes estimates of program benefits/net benefits and calculates estimated program performance incentives. This program has not yet been approved, so no benefits have been achieved at this point.

**ARIZONA PUBLIC SERVICE COMPANY**

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:  
JANUARY THROUGH JUNE 2005**

**Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

**Costs Incurred**

Costs incurred for this program during the first half of 2005 are listed below:

<b>ACC Program</b>	<b>Rebates &amp; Incentives</b>	<b>Training &amp; Technical Assistance</b>	<b>Consumer Education</b>	<b>Program Implement</b>	<b>Program Marketing</b>	<b>Planning &amp; Admin</b>	<b>Program Total Cost</b>
Large Non Res Existing	-	-	-	-	-	\$38,575	\$38,575

**Findings from all Research Projects**

No research projects were undertaken.

**Other Significant Information**

No other significant information to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: NON-RESIDENTIAL NEW CONSTRUCTION AND MAJOR RENOVATIONS**

#### **Description**

This proposed program was filed for approval on July 1, 2005. The proposed program includes three elements: Design Assistance, Prescriptive Measures, and Custom Efficiency. The Design Assistance component of the program emphasizes integrated design to influence equipment/systems selection and specification as early in the design development process as possible and provides design incentives and/or design assistance to cover the incremental resources involved in assessing alternative design options that would improve the energy-efficiency of the project. The prescriptive measures component of the program offers financial incentives, education, and training to encourage energy efficiency upgrades during non-residential new construction and major renovation projects. The Custom Efficiency component of the program provides custom efficiency incentives to implement energy efficiency measures not covered by the prescriptive incentives that are evaluated on a case-by-case basis.

#### **Program Modifications**

Not applicable. This program has not yet been approved.

#### **Program Goals, Objectives and Savings Targets**

The proposed program filed on July 1, 2005 includes program objectives and estimated savings.

#### **Programs Terminated**

Not applicable. This program has not yet been approved.

#### **Levels of Participation**

Not applicable. This program has not yet been approved.

#### **Evaluation and Monitoring Activities and Results**

In the first half of 2005, APS filed for approval to proceed with a DSM baseline and market potential study. The study was approved by the ACC, Decision No. 67816. As part of this research, the study will document the current state of the market for energy efficiency in new non-residential construction projects and major renovations and the potential for energy efficiency improvements in this segment.

#### **kW and kWh Savings**

Not applicable. This program has not yet been approved.

#### **Benefits and Net Benefits/Performance Incentive Calculation**

The program plan that APS filed on July 1, 2005 includes estimates of program benefits/net benefits and calculates estimated program performance incentives. This program has not yet been approved, so no benefits have been achieved at this point.

#### **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

**ARIZONA PUBLIC SERVICE COMPANY**

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:  
JANUARY THROUGH JUNE 2005**

**Costs Incurred**

Costs incurred for this program during the first half of 2005 are listed below:

<b>ACC Program</b>	<b>Rebates &amp; Incentives</b>	<b>Training &amp; Technical Assistance</b>	<b>Consumer Education</b>	<b>Program Implement</b>	<b>Program Marketing</b>	<b>Planning &amp; Admin</b>	<b>Program Total Cost</b>
Large Non Res New Const	-	-	-	-	-	\$42,199	\$42,199

**Findings from all Research Projects**

No research projects were undertaken.

**Other Significant Information**

No other significant information to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: SMALL NON-RESIDENTIAL DSM PROGRAM**

#### **Description**

This program was filed for approval on July 1, 2005. The proposed program provides prescriptive incentives for small non-residential customers for energy-efficiency improvements in lighting, HVAC ("heating, ventilation, and air conditioning"), motors, and refrigeration applications through a simple and straightforward mechanism for program participation. To support this approach, the program provides a "one source" audit and installation resource for small non-residential customers through a network of trained qualified contractors that meet rigorous program requirements. The program promotes a "systems approach" to improve the efficiency of small commercial HVAC systems. This will be accomplished by promoting proper sizing of new packaged air conditioning equipment, staged air conditioning equipment, and systems diagnostics and improvements that include air balancing, proper refrigerant charging, and duct leakage sealing. In addition, the program provides educational and promotional materials designed to assist building owners and operators in making decisions to improve the energy-efficiency of their facilities.

#### **Program Modifications**

Not applicable. This program has not yet been approved.

#### **Program Goals, Objectives and Savings Targets**

The proposed program filed on July 1, 2005 includes program objectives and estimated savings.

#### **Programs Terminated**

Not applicable. This program has not yet been approved.

#### **Levels of Participation**

Not applicable. This program has not yet been approved.

#### **Evaluation and Monitoring Activities and Results**

In the first half of 2005, APS filed for approval to proceed with a DSM baseline and market potential study. The study was approved by the ACC, Decision No. 67816. As part of this research, the study will document the current state of the market for energy efficiency in existing small non-residential facilities and the potential for energy efficiency improvements in this customer segment.

#### **kW and kWh Savings**

Not applicable. This program has not yet been approved.

#### **Benefits and Net Benefits/Performance Incentive Calculation**

The program plan that APS filed on July 1, 2005 includes estimates of program benefits/net benefits and calculates estimated program performance incentives. This program has not yet been approved, so no benefits have been achieved at this point.

#### **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

**ARIZONA PUBLIC SERVICE COMPANY**

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:  
JANUARY THROUGH JUNE 2005**

**Costs Incurred**

Costs incurred for this program during the first half of 2005 are listed below:

<b>ACC Program</b>	<b>Rebates &amp; Incentives</b>	<b>Training &amp; Technical Assistance</b>	<b>Consumer Education</b>	<b>Program Implement</b>	<b>Program Marketing</b>	<b>Planning &amp; Admin</b>	<b>Program Total Cost</b>
Small Business	-	-	-	-	-	\$25,755	\$25,755

**Findings from all Research Projects**

No research projects were undertaken.

**Other Significant Information**

No other significant information to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: BUILDING OPERATOR TRAINING PROGRAM**

#### **Description**

This program was filed for approval on July 1, 2005. The program provides subsidized training for building operators (managers) and facility maintenance technicians on energy-efficient building operating and maintenance practices.

Program training will be provided through a cooperative effort with the Electric League of Arizona ("ELA") in support of their "Institute for Facility Management Education" program, which includes industry expert training targeted to reach facility managers and building operators of medium to large commercial and industrial facilities. The Institute was developed in summer of 2003 by APS in conjunction with the ELA. The ELA is a state-wide, non-profit trade association supporting the electrical, HVACR ("heating, ventilation, air conditioning and refrigeration") and energy management industries through education, publications, consumer referral services and utility trade ally programs. The ELA issues a certificate of completion for participants that successfully complete Facility Maintenance Technician Training and Building Operator training.

#### **Program Modifications**

Not applicable. This program has not yet been approved.

#### **Program Goals, Objectives and Savings Targets**

The proposed program filed on July 1, 2005 includes program objectives and estimated savings.

#### **Programs Terminated**

Not applicable. This program has not yet been approved.

#### **Levels of Participation**

Not applicable. This program has not yet been approved.

#### **Evaluation and Monitoring Activities and Results**

In the first half of 2005, APS filed for approval to proceed with a DSM baseline and market potential study. The study was approved by the ACC, Decision No. 67816. As part of this research, the study will document the current state of the market for energy efficiency in existing non-residential facilities, the current awareness levels of energy efficiency among building operators and the potential for energy efficiency improvements in this customer segment.

#### **kW and kWh Savings**

Not applicable. This program has not yet been approved.

#### **Benefits and Net Benefits/Performance Incentive Calculation**

The program plan that APS filed on July 1, 2005 includes estimates of program benefits/net benefits and calculates estimated program performance incentives. This program has not yet been approved, so no benefits have been achieved at this point.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

### Costs Incurred

Costs incurred for this program during the first half of 2005 are listed below:

ACC Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Bldg Operator Training	-	-	-	-	-	\$5,824	\$5,824

### Findings from all Research Projects

No research projects were undertaken.

### Other Significant Information

No other significant information to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: ENERGY INFORMATION SERVICES PROGRAM**

#### **Description**

This program was filed for approval on July 1, 2005. The proposed program will provide monthly energy use information to large non-residential customers through an automated service maintained by a third party energy management information systems provider. The program provides the energy information service at a reduced fee to large commercial, industrial and institutional customers. At a minimum, the customer will receive monthly usage and demand reports that could be utilized to improve or monitor energy usage patterns, reduce energy use, reduce demands during on-peak periods and better manage their overall energy operations.

#### **Program Modifications**

Not applicable. This program has not yet been approved.

#### **Program Goals, Objectives and Savings Targets**

The proposed program filed on July 1, 2005 includes program objectives and estimated savings.

#### **Programs Terminated**

Not applicable. This program has not yet been approved.

#### **Levels of Participation**

Not applicable. This program has not yet been approved.

#### **Evaluation and Monitoring Activities and Results**

In the first half of 2005, APS filed for approval to proceed with a DSM baseline and market potential study. The study was approved by the ACC, Decision No. 67816. As part of this research, the study will document the current state of the market for energy efficiency in existing non-residential facilities, the current awareness levels of energy efficiency among building operators and the potential for energy efficiency improvements in this customer segment.

#### **kW and kWh Savings**

Not applicable. This program has not yet been approved.

#### **Benefits and Net Benefits/Performance Incentive Calculation**

The program plan that APS filed on July 1, 2005 includes estimates of program benefits/net benefits and calculates estimated program performance incentives. This program has not yet been approved, so no benefits have been achieved at this point.

#### **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

**ARIZONA PUBLIC SERVICE COMPANY**

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:  
JANUARY THROUGH JUNE 2005**

**Costs Incurred**

Costs incurred for this program during the first half of 2005 are listed below:

<b>ACC Program</b>	<b>Rebates &amp; Incentives</b>	<b>Training &amp; Technical Assistance</b>	<b>Consumer Education</b>	<b>Program Implement</b>	<b>Program Marketing</b>	<b>Planning &amp; Admin</b>	<b>Program Total Cost</b>
Energy Information Services	-	-	-	-	-	\$5,878	\$5,878

**Findings from all Research Projects**

No research projects were undertaken.

**Other Significant Information**

No other significant information to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PROGRAM: SCHOOLS PROGRAM**

#### **Description**

This program was filed for approval on July 1, 2005. The proposed program provides assistance in reducing the energy used in public school buildings, including charter schools. The incentives that will be paid to schools for DSM measures are the same as for the non-school non-residential DSM programs. However, the schools have a program budget of \$560,000 per year which is reserved exclusively for school use under this program. If schools over subscribe that budget, they can participate in the non-school non-residential program.

#### **Program Modifications**

Not applicable. This program has not yet been approved.

#### **Program Goals, Objectives and Savings Targets**

The proposed program filed on July 1, 2005 includes program objectives and estimated savings.

#### **Programs Terminated**

Not applicable. This program has not yet been approved.

#### **Levels of Participation**

Not applicable. This program has not yet been approved.

#### **Evaluation and Monitoring Activities and Results**

In the first half of 2005, APS filed for approval to proceed with a DSM baseline and market potential study. The study was approved by the ACC, Decision No. 67816. As part of this research, the study will document the current state of the market for energy efficiency in school facilities and the potential for energy efficiency improvements in this customer segment.

#### **kW and kWh Savings**

Not applicable. This program has not yet been approved.

#### **Benefits and Net Benefits/Performance Incentive Calculation**

The program plan that APS filed on July 1, 2005 includes estimates of program benefits/net benefits and calculates estimated program performance incentives. This program has not yet been approved, so no benefits have been achieved at this point.

#### **Problems Encountered and Proposed Solutions**

No problems were encountered during this reporting period.

**ARIZONA PUBLIC SERVICE COMPANY**

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:  
JANUARY THROUGH JUNE 2005**

**Costs Incurred**

Costs incurred for this program during the first half of 2005 are listed in the attached table:

<b>ACC Program</b>	<b>Rebates &amp; Incentives</b>	<b>Training &amp; Technical Assistance</b>	<b>Consumer Education</b>	<b>Program Implement</b>	<b>Program Marketing</b>	<b>Planning &amp; Admin</b>	<b>Program Total Cost</b>
Schools	-	-	-	-	-	\$15,135	\$15,135

**Findings from all Research Projects**

No research projects were undertaken.

**Other Significant Information**

No other significant information to report.

# ARIZONA PUBLIC SERVICE COMPANY

## DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JANUARY THROUGH JUNE 2005

### **PORTFOLIO PLANNING: DSM MEASUREMENT, EVALUATION AND RESEARCH**

#### **Description**

In Decision No.67816, the ACC pre-approved the expenditure of up to \$500,000 of DSM funds for a market assessment study, which will provide reliable information on the market potential, kW and kWh savings potential and costs associated with energy-efficiency technologies. Specifically, the DSM study will assess the potential for improving the market penetration of energy-efficient technologies and practices in residential and non-residential customer segments. The study information will be used to confirm program design assumptions and to target programs to maximize cost effectiveness.

In the DSM Program Portfolio Plan filed on July 1, 2005, APS proposes up to \$1.3 million per year to conduct measurement, evaluation and research of DSM programs. For the reporting period, this research includes preparation of the Baseline Study pre-approval and RFP, DSM collaborative group meetings and public comment meetings to assist in development of the DSM portfolio.

#### **Costs Incurred**

Costs incurred during the first half of 2005: \$14,956