



ORIGINAL

A subsidiary of Pinnacle West Capital Corporation



0000067532

50

Barbara A. Klemstine
Director
Regulation & Pricing

Tel: 602-250-4563
Fax: 602-250-3003
e-mail: Barbara.Klemstine@aps.com

Mail Station 9708
PO Box 53999
Phoenix, Arizona 85072-3999

March 1, 2007

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, AZ 85007

Arizona Corporation Commission
DOCKETED

MAR -1 2007

DOCKETED BY	nr
-------------	----

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

Dear Sir or Madam:

Pursuant to Arizona Corporation Commission Decision No. 67744, provided is the DSM Semi-Annual Report covering the period of July 1 through December 31, 2006.

If you have any questions, please feel free to call me.

Sincerely,

Barbara A. Klemstine

BAK/rcm

Cc: Brian Bozzo
Docket Control (Original + 13 copies)

AZ CORP COMMISSION
DOCUMENT CONTROL

2007 MAR -1 A 11: 55

RECEIVED

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

This progress report includes the following information for all APS Demand Side Management (DSM) programs that were in place during this reporting period, including programs for residential, non-residential and low income customers:

- 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.

Summary pages detailing the program expenses and DSM Electric Savings Benefits are provided in Tables 1 and 2. The Performance Incentive Calculation is shown in Table 3. A summary of 2006 DSM program expenses is provided in Table 4.

ARIZONA PUBLIC SERVICE COMPANY

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

Index

Table 1 DSM Program Expenses: July – December 2006.....	3
Table 2 DSM Electric Savings Benefits.....	4
Table 3 Performance Incentive Calculation	5
Energy Wise Low Income Weatherization	6
Residential Existing Homes HVAC	9
Residential New Home Construction	13
Consumer Products Program	16
Non-Residential Program for Large Existing Facilities.....	20
Non-Residential New Construction and Major Renovations	26
Small Business Program.....	32
Building Operator Training Program (“BOT”).....	38
Energy Information Services (“EIS”) Program.....	41
Schools Program	43
DSM Measurement, Evaluation and Research	52
Table 4 DSM Program Expenses: January – December 2006	54
Certification by APS of DSM Semi-Annual Progress Report.....	55

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

**Table 1
DSM Program Expenses: July – December 2006**

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation ¹	Program Marketing	Planning & Admin	Program Total Cost	
Residential								
Low Income	\$266,396	\$2,819	\$1,580	\$36,589	\$4,557	\$30,251	\$342,193	
Res Existing Homes HVAC	\$439,400	\$34,668	\$89,295	\$51,640	\$215,652	\$17,354	\$848,009	
Res New Home Construction	\$44,778	\$57,022	\$6,294	\$28,247	\$164,354	\$38,078	\$338,773	
Consumer Products	\$1,082,965	\$0	\$1,582	\$123,744	\$107,812	\$43,805	\$1,359,908	
Totals for Residential	\$1,833,539	\$94,510	\$98,750	\$240,219	\$492,376	\$129,488	\$2,888,881	
Non-Residential								
Large Existing Facilities	\$759,971	\$2,446	\$4,531	\$516,969	\$7,826	\$48,290	\$1,340,033	
Large Non Res New Const	\$62,480	\$3,072	\$1,957	\$649,501	\$7,712	\$50,840	\$775,562	
Small Business	\$62,240	\$0	\$1,471	\$356,283	\$6,955	\$26,804	\$453,752	
Bldg Operator Training	\$0	\$17,910	\$0	\$10,757	\$4,360	\$1,186	\$34,213	
Energy Information Svcs	\$0	\$0	\$0	\$12,971	\$0	\$10,094	\$23,065	
Schools ²	\$73,380	\$0	\$143	\$77,126	\$416	\$10,619	\$161,684	
Total for Non-Residential	\$958,071	\$23,428	\$8,100	\$1,623,607	\$27,269	\$147,834	\$2,788,309	
Segment Totals	\$2,791,610	\$117,937	\$106,851	\$1,863,826	\$519,645	\$277,321	\$5,677,191	
							Program Costs	\$5,677,191
							Measurement, Evaluation, & Research (MER)	\$327,614
							Performance Incentive³	\$1,938,767
							TOTAL	\$7,943,572

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.

Measurement, Evaluation, & Research (MER) -These activities will identify current baseline efficiency levels and the market potential of DSM measures, perform process evaluations, verify that energy-efficient measures are installed, track savings, and identify additional energy efficiency research.

Performance Incentive – Share (%) of DSM net economic benefits (benefits minus cost), capped at 10% of total DSM expenditures, inclusive of the Performance Incentive.

1 Includes costs for Implementation Contractor (IC) for the Small Non-Residential, Non-Residential Existing Facilities, New Construction & Major Renovation and Schools Programs.

2 Schools are allowed to receive funding from other non-residential programs as well. Refer to the subsection on the Schools Program for additional information on total funds allocated to school districts to date.

3 The Performance Incentive is calculated in Table 3 and the methodology/calculation is pending ACC approval.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

**Table 2
DSM Electric Savings Benefits**

DSM Program	Capacity Savings MW	Lifetime ¹ MWh Savings	Program Cost	Societal Benefits	Societal Costs	Net Benefits
Residential						
Low Income ²	0.06	415	\$342,193	\$269,405	\$269,405	\$0 ⁴
Res Existing Homes HVAC ³	2.15	79,236	\$848,009	\$3,122,648	\$2,065,915	\$1,056,733
Res New Home Construction ³	0.12	5,653	\$338,773	\$211,581	\$342,595	(\$131,014)
Consumer Products	9.85	346,637	\$1,359,908	\$20,336,848	\$4,332,147	\$16,004,701
Totals for Residential	12.18	431,941	\$2,888,883	\$23,940,482	\$7,010,062	\$16,930,420
Non-Residential						
Large Existing Facilities	1.83	173,830	\$1,340,033	\$4,359,261	\$2,035,650	\$2,323,611
Large Non Res New Const	0.15	19,929	\$775,562	\$478,917	\$642,881	(\$163,964)
Small Business	0.12	10,274	\$453,752	\$136,036	\$437,187	(\$301,152)
Bldg Operator Training	0.03	3,983	\$34,213	\$135,961	\$54,103	\$81,858
Energy Information Svcs	0.00	0	\$23,065	\$0	\$23,065	(\$23,065)
Schools	0.13	13,291	\$161,685	\$1,386,759	\$519,182	\$867,577
Total for Non-Residential	2.26	221,307	\$2,788,310	\$6,496,934	\$3,712,068	\$2,784,865
Subtotal	14.44	653,248	\$5,677,193	\$23,671,077	\$6,740,657	\$19,715,285
Measurement, Evaluation & Research	-	-	\$327,614	-	-	(\$327,614)
Performance Incentive ⁵			\$1,938,767			\$1,938,767
TOTAL			\$7,943,574			\$21,326,438

1 Refers to savings over the expected lifetime of all program measures.

2 Program Costs include weatherization and bill assistance. Societal Costs do not include bill assistance because it does not contribute to electric savings.

3 kW and kWh savings are not quantified for residential market transformation programs that were in place prior to April 2006.

4 Consistent with the ACC Staffs' analysis in Decision No. 68647, the societal benefits is equal to the societal costs, resulting in a benefits to cost ratio of 1.00.

5 As calculated in Table 3.

ARIZONA PUBLIC SERVICE COMPANY

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

**Table 3
Performance Incentive Calculation**

DSM Program	July - Dec 2006	Program to Date	
	Net Benefit	Net Benefit	10% Share
Residential			
Res Existing Homes HVAC	\$ 1,056,733	\$ 322,360	\$ 32,236
Res New Home Construction	\$ (131,014)	\$ (597,429)	\$ (59,743)
Consumer Products	\$ 16,004,701	\$ 26,040,909	\$ 2,604,091
Non-Residential			
Large Existing Facilities	\$ 2,323,611	\$ 1,909,206	\$ 190,921
Large Non Res New Construction	\$ (163,964)	\$ (641,944)	\$ (64,194)
Small Business	\$ (301,152)	\$ (555,462)	\$ (55,546)
Bldg Operator Training	\$ 81,858	\$ 99,398	\$ 9,940
Energy Information Svcs	\$ (23,065)	\$ (30,173)	\$ (3,017)
Schools	\$ 867,577	\$ 784,866	\$ 78,487
Subtotal	\$ 19,715,285	\$ 27,331,731	\$ 2,733,173
Measurement, Evaluation & Research	\$ (327,614)	\$ (891,090)	\$ (89,109)
Total	\$ 19,387,671	\$ 26,440,641	\$ 2,644,064
	Performance Incentive earned from July 2005 thru June 2006		\$ 705,297
		Performance Incentive due to APS for this reporting period ¹	\$ 1,938,767

1 Performance incentive earned to date is subtracted from the total "program to date" 10% share of net benefits to arrive at the amount of performance incentive earned for this period.

This calculation does not include the Low Income Program. As per Staff's analysis in Decision 68647, the net benefits for this program are \$0.

Maximum Performance Incentive allowed is 10% of the spending level as ordered in Decision No. 67744. This is \$4.8 million over the three-year period. Approval of the incentive calculation is pending ACC approval.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PROGRAM: ENERGY WISE LOW INCOME WEATHERIZATION

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 by various community action agencies throughout APS' service territory.

Program Modifications

No modifications for this reporting period.

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.
- Decision No. 68647 estimates that the Weatherization component of the Energy Wise Program serves 382 homes per year (based on APS' budget) and would result in reduced energy consumption of 763 MWh per year and a demand reduction of 115 kW per year.

Programs Terminated

No programs were terminated during this reporting period.

Levels of Participation

A total of 459 households received assistance during the reporting period, July through December 2006 and is broken down as follows:

Type of Assistance	Number of Households
Bill Assistance	270
Health and Safety	0
Repair and Replace	25
Weatherization	164
Total	459

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.

ARIZONA PUBLIC SERVICE COMPANY

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

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.

kW and kWh Savings

Of the 459 households participating in the program, a total of 189 homes received weatherization and/or repair & replace services that contributed to the energy savings.

No. of Homes	kW Savings	kWh Savings
189	62.26	414,629

The final savings are adjusted for line losses (9.8%).

The kW and kWh factors used to calculate the savings are based on data from the Department of Commerce Energy Office study of 150 weatherized homes. 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.

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The Performance Incentive calculation does not include the Energy Wise Program since this program has a zero net benefit and APS should not be penalized for performing well on this program. Consequently, the net benefits for the Energy Wise Program for this reporting period as shown in Table 2 are \$0.

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

Costs Incurred

Costs incurred for this program during the current reporting period are listed below:

Activity	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Bill Assistance	\$72,788	-	-	-	-	-	\$72,788
Health & Safety	\$0	-	-	-	-	-	\$0
Repair and Replace	\$44,856	-	-	-	-	-	\$44,856
Weatherization	\$148,753	-	\$915	-	-	-	\$149,668
3rd Party Manager Arizona Community Action Association	-	-	-	\$29,162	-	-	\$29,162
APS Program Support	-	\$2,819	\$665	\$7,427	\$4,557	\$30,251	\$45,719
Total	\$266,396	\$2,819	\$1,580	\$36,589	\$4,557	\$30,251	\$342,193

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Findings From All Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

Other Significant Information

A contract to fund weatherization activities on the reservations served by APS that are under the jurisdiction of the Inter Tribal Council of Arizona has been signed. Contract negotiations with the Navajo Nation to fund weatherization activities on the Navajo Nation where APS provides service are in process.

2,000 Compact Fluorescent Lights ("CFLs") from the Consumer Products program were provided to the Community Action Agencies participating in the Energy Wise Low Income Weatherization program for distribution to low income households within the APS service territory as part of the weatherization service.

To promote weatherization projects for multifamily housing, APS has been actively encouraging partnerships between the community action agencies providing the weatherization and public housing authorities in conjunction with the federal Housing and Urban Development (HUD) agency. On August 30th, in conjunction with HUD, we presented information about the program to several public housing authorities including the Chandler Housing Authority and the Yuma Housing Department, encouraging them to partner with their local community action agency to weatherize their low income housing stock. There were subsequent presentations on November 7th and November 14th. A direct outcome of these efforts was the partnering between the Maricopa County Human Services Department and the Housing Authority of Maricopa County to weatherize 20 units in Buckeye.

Additional marketing efforts include presenting information about the weatherization program at the monthly meeting of the Hopi Community Service Advocates in Tuba City on December 21st. Information about the Energy Wise Low Income Weatherization Program was also presented to a variety of agencies at the following APS Low Income Summits:

- September 29th, Tempe
- October 19th, Globe
- October 24th, Casa Grande
- November 1st, Avondale

Presentations were also made to the American Association of Retired Persons on October 24th in Phoenix and at the Focus on Emergency Assistance Workshop at the Glendale Unified School District on December 8th.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

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.

The AC Rebate program builds on the existing APS Qualified Contractor program, and offers financial incentives to encourage upgrades to high-efficiency equipment (≥ 14 SEER/12 EER) that exceeds US EPA/DOE Energy Star® energy-efficiency standards.

Program Modifications

No modifications for this reporting period.

Program Goals, Objectives and Savings Targets

This program uses a combination of financial incentives, contractor training and consumer education to promote high efficiency HVAC systems in existing residential homes within the APS service territory.

Prior to April 2006, this program was 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. As such, the program offered no rebates or incentives and kW and kWh savings were not tracked. In April 2006, Decision No. 68648 approved a new program which builds upon the existing market transformation education and training efforts, and adds rebates for high efficiency AC equipment, quality installation, and HVAC system diagnostics and repair. Savings will be tracked for this program.

According to ACC Staff's analysis of the new program for three years, the energy-efficiency savings expected to result from the HVAC Efficiency Program could provide about \$1.4 million in net benefits and could reduce annual peak demand by about 4.2 MW and energy consumption by about 173,000 MWh over the life of the measures.

Programs Terminated

No programs were terminated during this reporting period.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Levels of Participation

In the second half of 2006:

- Rebates for high efficiency AC equipment were rolled out to customers on June 1, 2006. During this reporting period, a total of 1,379 rebates were paid in the High Efficiency AC Rebate program, including 748 of the \$250 rebates for 14 SEER/12 EER equipment and 631 of the \$400 rebates for 16 SEER/14 EER equipment.
- There are currently 52 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 300 HVAC technicians participated in APS sponsored training courses in order to meet APS Qualified Contractor program training requirements.
- APS provided over 5,400 referrals to customers seeking HVAC service, repair or replacement of their home HVAC system.
- 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 6,920 unique user visits to the APS Energy Survey home energy audit at aps.com.

Evaluation and Monitoring Activities and Results

On April 12, 2006 in Decision No. 68648, the ACC approved funding for Measurement, Evaluation, and Research (MER) activities to assist in verifying the impact and cost effectiveness of APS' DSM programs. APS selected Summit Blue Consulting to conduct program MER activities. Summit Blue Consulting is currently working with APS to develop program research plans. The program research plans will be submitted for Staff review when completed.

Other evaluation activities for this program during this reporting period include the development of survey instruments to be used in collecting feedback from HVAC contractors and customers who participate in the AC Rebate program. In addition, the MER contractor began conducting on-site field verification activities on a randomly drawn sample of HVAC installations that received rebates to verify equipment installations.

kW and kWh Savings

Type Of Unit	# Units	Annual kWh Savings per Ton	Avg Tons/Unit	TOTAL Annual MWh Savings	Est Measure Life	Total Lifetime MWh	kW Demand Savings Per Ton	Total MW Savings
14 SEER/12 EER	748	804	4	2,641	15	39,620	0.339	1.11
16 SEER/14 EER	631	953	4	2,641	15	39,616	0.376	1.04
TOTAL	1,379			5,282		79,236		2.15

The final savings are adjusted for line losses (9.8%).

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

In addition to the savings shown above, the Residential Existing Homes HVAC program includes a number of market transformation efforts such as contractor training and customer education activities designed to transform the market for energy efficiency. These elements of the program produce additional energy savings and benefits that are not quantified

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The details for the Performance Incentive Calculation are provided in Table 3.

Problems Encountered and Proposed Solutions

APS, contractors and customers have all had more difficulty than expected with obtaining EER efficiency levels from AC manufacturers and refrigeration industry data sources.

To address the situation, extensive work has been conducted to re-examine savings and peak demand impacts, incremental cost and other inputs to the societal cost test analysis. The results of the analysis are being used to restructure the program efficiency levels to better align the EER requirement with the energy efficiency tier levels that have been established in the ARI/CEE database or to drop the EER requirement entirely from the program. APS will submit an analysis to Staff with proposed modifications to the program efficiency requirements for approval.

Costs Incurred

Costs incurred for this program during the current reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Res Existing HVAC	\$439,400	\$34,668	\$89,295	\$51,640	\$215,652	\$17,354	\$848,009

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

Other Significant Information

APS is working with key partners on infrastructure needed to roll out the quality install and diagnostics measures that were approved in April 2006.

For the quality install measure, APS is working to expand the reach of the APS Qualified Contractor program outside the metro area so that customers outside of metro can take advantage of the quality install incentive. APS has scheduled a special 2-day intensive training seminar and qualification exams to allow contractors from outside the metro area to conveniently achieve the training required to participate in the Qualified Contractor program. The first training seminar will be held March 1-2, 2007. APS has been working with the Electric League of Arizona to implement the training and market the program to contractors outside of the metro area, including a direct mail campaign and advertising in the HVACR Today trade newspaper.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

For diagnostic testing and repair, APS is currently working with the EPA Energy Star program, the Arizona Department of Commerce Energy Office, the Building Performance Institute ("BPI") and the non-profit Foundation for Senior Living to offer BPI certification for contractors who offer home performance testing and repair. APS is working with the EPA to be able to market the program to customers as "Home Performance with Energy Star". The "Home Performance with Energy Star" program is a new EPA program being used to promote diagnostic testing and efficiency improvements to existing homes.

Marketing and consumer/contractor education efforts for this program during the reporting period include:

- Monthly ad placements in HVACR Today newspaper targeted to the HVAC industry. The ads promote the new APS High Efficiency AC Rebate program to contractor and manufacturer/distributor trade allies.
- Articles in June/July and October/November 2006 APS Lifestyles residential customer newsletter.
- Hot News on homepage of aps.com.
- Print ad placements to promote the AC Rebate program to APS customers in the Arizona Republic, Buckeye Valley News, and the Phoenix Business Journal.
- Article in the October issue of the Southwestern Home Journal, an insert in the Arizona Republic delivered to 250,000 households.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PROGRAM: RESIDENTIAL NEW HOME CONSTRUCTION

Description

This program promotes high efficiency construction practices for new homes. It offers incentives to builders who meet program energy efficiency standards. 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.

On July 1, 2006 APS introduced the new APS Energy Star Homes program to homebuilders. The new program builds on the prior APS residential new construction market transformation program (Performance Built Homes) and updates the program to the new more stringent 2006 EPA Energy Star Homes program standards. The program also takes advantage of the national Energy Star brand name, and promotes the EPA/DOE Energy Star label to prospective homebuyers. To encourage builders to meet the program's high efficiency standards, APS provides builder incentives of \$400 per home. The new program retains the builder training and consumer and Realtor education efforts that were elements of the prior market transformation program.

Program Modifications

No modifications for this reporting period.

Program Goals, Objectives and Savings Targets

The program objective is to increase the penetration of homes built to high efficiency standards. The rationale for this program is that 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 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.

According to ACC Staff's analysis of the new program for three years, the energy-efficiency savings expected to result from the New Construction Program could provide about \$9.0 million in net benefits and could reduce annual peak demand by about 13.4 MW and energy consumption by about 380,000 MWh over the life of the measures.

Programs Terminated

No programs were terminated during this reporting period.

Levels of Participation

APS Energy Star Homes program was kicked off to builders July 1, 2006. During this reporting period, APS signed up 16,940 homes to participate in the program. At the end of the reporting period, there were 12 homebuilders and 68 subdivisions participating in the program. All of the participating homebuilder communities are anticipated to start construction by the end of 2007.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

During the reporting period, APS paid homebuilder incentives for 81 APS Energy Star homes that were completed during the period.

APS sponsored a one-day building science training for northern Arizona homebuilders that was conducted by the Energy and Environmental Building Association ("EEBA") at Yavapai Community College in August.

In September, APS sponsored building science training with national expert John Tooley from Advanced Energy Corp. Over 5 days of training, over 265 members of the homebuilding industry attended the full-day building science course.

Evaluation and Monitoring Activities and Results

On April 12, 2006 in Decision No. 68648, the ACC approved funding for Measurement, Evaluation, and Research (MER) activities to assist in verifying the impact and cost effectiveness of APS' DSM programs. APS selected Summit Blue Consulting to conduct program MER activities. Summit Blue Consulting is currently working with APS to develop program research plans. The program research plans will be submitted for staff review when completed.

Other evaluation activities for this program during this reporting period include the development of a survey instrument to be used in collecting feedback from builders who participate in the program and development of a preliminary design for the Residential New Construction Program tracking database.

kW and kWh Savings

Measure	# Homes completed	Annual kWh Savings per Home	TOTAL Annual MWh Savings	Est Measure Life (yrs)	TOTAL Lifetime MWh	kW Demand Savings Per Home	TOTAL MW Savings
APS Energy Star Homes	81	3,178	283	20	5,653	1.344	0.12

The final savings are adjusted for line losses (9.8%).

In addition, program consumer education and homebuilder training efforts produce significant additional energy savings and benefits that are not quantified here.

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The details for the Performance Incentive calculation are provided in Table 3.

Problems Encountered and Proposed Solutions

No problems encountered.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Costs Incurred

Costs incurred for this program during the current reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Res New Home Construction	\$44,778	\$57,022	\$6,294	\$28,247	\$164,354	\$38,078	\$338,773

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

Other Significant Information

Program marketing efforts during this reporting period include the following advertising placements:

- (Jul-Dec) Arizona New Homes and Lifestyles – (magazine targeted to prospective homebuyers)
- (Jul-Dec) New Home Directory – (resource guide for Realtors)
- (Jul-Dec) Homestore.com/Move.com – (website for Realtors and homebuyers)
- (Jul-Dec) Builder magazine – (targeted to homebuilders)
- Information on aps.com.
- Homebuilder model home point of sale materials – Energy Cost Brochures, Sales agent booklet to describe Energy Star Homes features.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PROGRAM: CONSUMER PRODUCTS PROGRAM

Description

This program promotes high-efficiency EPA/DOE Energy Star® compact fluorescent lamps (CFL's). CFL's use an average of 75% less energy than standard incandescent bulbs and last up to ten times longer, typically saving consumers more than \$25 in energy costs over the life of each bulb. The program offers discounts on CFL's at local retail locations through cooperative agreements with retailers and lighting manufacturers. This provides consumers with reduced retail prices for CFL's at local lighting retailers, with prices below \$0.99 per bulb.

Program Modifications

No modifications for this reporting period.

Program Goals, Objectives and Savings Targets

The program goals, objectives, and savings targets are identified in the Consumer Products program plan. According to the Staff Recommended Decision issued on July 25, 2005, the lighting portion of the Consumer Products program "would result in about \$20.8 million net benefits to society" over the lifetime of the measures installed thru the current program planning period (2005-2007).

Programs Terminated

No programs were terminated during this reporting period.

Levels of Participation

During the July to December reporting period, the program resulted in sales of 1,013,801 CFLs through participating retail locations. During the period, there were approximately 300 retail outlets throughout the APS service territory where APS customers can purchase discounted CFLs. Participating retailers during this reporting period include: Ace Hardware (select locations), AJs Fine Foods, AKA Green, Albertson's, Bashas, Big Lots, Costco, CVS, Food City, Home Depot, Lowe's, Osco Drug, True Value Hardware (select locations), Walgreens, Walmart.

Evaluation and Monitoring Activities and Results

On April 12, 2006 in Decision No. 68648, the ACC approved funding for Measurement, Evaluation, and Research (MER) activities to assist in verifying the impact and cost effectiveness of APS' DSM programs. APS selected Summit Blue Consulting to conduct program MER activities. Summit Blue Consulting is currently working with APS to develop program research plans. The program research plans will be submitted for staff review when completed.

Other evaluation activities for this program during this reporting period include the development of survey instruments to be used in collecting feedback from general consumers, program participants, and participating retailers. In addition, the MER contractor completed surveys of 35 program participants, completed visits to 38 participating retail locations to conduct participating retailer interviews, and completed a general population survey of 450 residential customers.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

kW and kWh Savings

Units	Wattage	Watts Saved	Hours Per Year	Est. Measure Life (yrs)	MWh Savings per Year	Lifetime MWh Savings	MW Demand Savings
2,184	9	16	1,000	5.5	38	211	7
2,184	11	29	1,000	5.5	70	382	12
485,507	13	47	1,000	5.5	25,055	137,803	4,259
181,650	14	46	1,000	5.5	9,175	50,461	1,560
22,216	14	51	1,000	5.5	1,244	6,842	211
74,533	15	50	1,000	5.5	4,092	22,505	696
10,735	15	45	1,000	5.5	530	2,917	90
2,184	17	43	1,000	5.5	103	567	18
2,900	18	57	1,000	5.5	181	998	31
49,266	20	55	1,000	5.5	2,975	16,363	506
67,710	23	67	1,000	5.5	4,981	27,396	847
106,732	23	77	1,000	5.5	9,024	49,631	1,534
6,000	26	74	1,000	5.5	488	2,681	83
1,013,801							
Indirect cooling energy savings				5.0 kWh/bulb/yr	5,069	27,880	
Total Savings					63,025	346,637	9,854

The final savings are adjusted for line losses (9.8%).

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The details for the Performance Incentive calculation are provided in Table 3.

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

Costs Incurred

Costs incurred for this program during the current reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Consumer Products	\$1,082,965	\$0	\$1,582	\$123,744	\$107,812	\$43,805	\$1,359,908

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Other Significant Information

In recognition of the outstanding results from the Consumer Products program, APS has been selected by the US Environmental Protection Agency (EPA) as a 2007 Energy Star Partner of the Year Award Winner for Energy Efficiency Program Delivery. According to the EPA, "The applications submitted by partners this year were extremely competitive and your application exemplified Arizona Public Service's outstanding commitment and dedication to environmental protection through energy efficiency."

In addition to the bulb sales at retail locations, APS purchased a supply of 10,000 CFLs to use for the low income program and for customer education and awareness building purposes. Of these, 2,000 CFLs were provided to the Community Action Agencies participating in the Energy Wise Low Income Weatherization program for distribution to low income households within the APS service territory. Recent studies indicate there is low awareness of CFLs among low income households. A limited quantity of bulbs is also being provided for use in APS informational displays and for educational handouts at community events throughout the APS service territory.

The program conducted more than 600 retailer visits from July through December to provide retailer training, assess inventories of merchandise, check Point of Purchase displays, addressing availability of qualified product, and communicating with sales staff.

APS conducted extensive customer outreach efforts to promote the CFL program and educate customers. Consumer education events during the reporting period included:

- July 14 – Scottsdale, Lowe's
- July 29 – Prescott, True Value Hardware
- July 29 – Prescott, Home Depot
- August 4 – Yuma, Lowe's
- August 11 – Phoenix, Lowe's
- August 12 – Payson, Home Depot
- August 18 – Casa Grande, Home Depot
- August 24 – Avondale, Home Depot
- September 1 – Surprise, Lowe's
- September 9 – Sun City West, True Value
- September 23 – Glendale, Lowe's
- November 4 – Chandler, Home Depot

In addition, the program participated in a number of community events that were targeted to Hispanic customers including:

- September 16-17 – Phoenix, Alma de la Gente Fiestas Patrias
- October 28-29 – Phoenix, Expo Tu Casa

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

For the annual national EPA "Change a Light, Change the World" campaign, APS helped get proclamations from both Governor Napolitano and Phoenix Mayor Phil Gordon to change out to CFLs. APS also partnered with the Department of Housing and Urban Development (HUD), the Housing Authority of Maricopa County (HAMC), the Arizona Energy Office and the Environmental Protection Agency (EPA) to conduct a lighting change-out at a 24-unit housing complex for elderly and disabled customers in Surprise. APS provided 336 CFLs for the event, which received coverage in local newspapers.

An additional event to promote the CFL program was held on Dec 1 in conjunction with Valley Forward, one of the premier non-profit environmental organizations in Arizona. APS provided CFLs that were used in innovative centerpieces for the Valley Forward's 37th Annual Luncheon. Guests were invited to take a CFL with them in exchange for their pledge to change out at least 5 bulbs in their home, and to help act as "ambassadors" to spread the word about the benefits of CFLs.

Advertising for the CFL program included the following:

- July 29 – Prescott Daily Courier
- July 29 – Prescott Valley Tribune
- August 12 – Payson Round Up
- September 1 – Surprise Today
- July-September – KNIX radio and KESZ radio, Phoenix

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PROGRAM: NON-RESIDENTIAL PROGRAM FOR LARGE EXISTING FACILITIES

Description

The Large Existing Facilities Program provides prescriptive incentives for owners and operators of large (over 200 kW aggregated demand) non-residential facilities for energy-efficiency improvements in lighting, HVAC, motors and refrigeration applications. The program also provides incentives 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. Additional incentives are available to provide these building owners and managers' assistance in determining the feasibility of energy efficiency improvements. 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

No modifications for this reporting period.

Program Goals, Objectives and Savings Targets

- Provide DSM opportunities for existing large non-residential customers.
- Promote the installation of high-efficiency technologies including, but not limited to lighting, HVAC equipment, motors, and refrigeration systems.
- Identify and pursue retrofit opportunities within this market segment.
- Increase the efficiency of existing facilities through the testing and retro-commissioning of large central HVAC systems, as well as other end-use measures.
- Promote integrated solutions to the extent possible.

According to the ACC Staff's analysis of the new program – for three years, the energy efficiency savings expected to result from the Large Existing Program could reduce annual peak demand by about 10 MW and 856,000 MWh over the life of the measures.

Programs Terminated

No programs were terminated during this reporting period.

Levels of Participation

With ACC approval of this program on February 23, 2006, the Large Existing Facilities program transitioned from start-up phase for the previous reporting period, to an implementation phase in this reporting period. The Large Existing Facilities Program has generated considerable customer interest and activity thus far. A total of 117 active applications for large existing incentives have been received, from 52 unique customers. Applications from school districts comprise 21 of the 117 applications. As of December 31, 2006, \$762,296 in incentives were paid. This represents approximately 22% of the total incentive budget paid for large existing projects. While the program offers a pre-notification process to reserve incentive funds, final applications are only processed after the project is completed and all required documentation is submitted and approved by KEMA.

ARIZONA PUBLIC SERVICE COMPANY

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

Incentive Status by Fund for Active Applications	Incentives Paid
Large Existing – Prescriptive & Custom	\$759,971
Large Existing – Feasibility and Retro-commissioning studies	\$2,325
Total Large Existing Funds	\$762,296

During this reporting period, there was one study subsidy paid on October 12 for \$2,325. This study was an energy feasibility study for a golf and country club. No further applications for associated measures have been received by the program.

Evaluation and Monitoring Activities and Results

On April 12, 2006 in Decision No. 68648, the ACC approved funding for Measurement, Evaluation, and Research (MER) activities to assist in verifying the impact and cost effectiveness of APS' DSM programs. APS selected Summit Blue Consulting to conduct program MER activities. Summit Blue Consulting is currently working with APS to develop program research plans. The program research plans will be submitted for Staff review when completed.

Summit Blue has made progress on the MER Research Plan for the Large Existing. Summit Blue has also reviewed the implementation contractor's data base and provided feedback for improvements. Field work for evaluation and verification purposes began with onsite inspections on lighting projects completed for 13 unique customers. Data logging equipment was installed at 8 sites within this sample. Summit Blue also identified and began drafting two evaluation case studies of retrofit projects, including 1 prescriptive and 1 custom project in the Large Existing Program.

kW and kWh Savings

The following table reflects the total energy demand and saving goal and achievements in the second half of 2006 for the Large Existing Facilities. Only actual savings from projects that are completed and incentives paid are being counted in this report.

kW Savings	Annual kWh Savings	Lifetime kWh Savings
1,830	11,229,594	173,829,841

The final savings are adjusted for line losses (9.8%).

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The details for the Performance Incentive calculation are provided in Table 3.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Problems Encountered and Proposed Solutions

- Retro-commissioning issues to consider at the 13 month filing in March 2007:
 - The current program attributes no savings to retro-commissioning studies. We now have reason to believe that in practice, retro-commissioning can yield in significant savings from improved operations and energy efficiencies that typically result. It may be more appropriate to categorize this as a measure with associated savings versus a technical study as it is currently classified.
 - The \$10,000 per customer annual limit for retro-commissioning provides little incentive for multi-site customers to retro-commission multiple facilities. Multi-site customers make up the primary market for retro-commissioning firms due to efficiencies in the sales and implementation processes. The relatively low incentive for this market may partially explain the lack of retro-commissioning firms in Arizona. As of December 31, 2006, the program had not received any applications for retro-commissioning study incentives.

Costs Incurred

Costs incurred for this program during the current reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement*	Program Marketing	Planning & Admin	Program Total Cost
Large Existing Facilities	\$759,971	\$2,446	\$4,531	\$516,969	\$7,826	\$48,290	\$1,340,033

*The following table provides a more detailed breakdown of the IC costs, which are included in the Program Implement column above.

DSM Program	IC - Implementation	IC - Marketing	IC - Education	IC - Technical Services	IC - Total Cost
Large Existing Facilities	\$246,375	\$152,875	\$39,425	\$78,294	\$516,969

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

Other Significant Information

APS hired KEMA to implement the Small Non-Residential, Large Existing Facilities, New Construction & Major Renovation and Schools Programs. The implementation contractor (IC) began program activities on March 1, 2006. All of the Non-Residential Programs, except for the Building Operator Training Program ("BOT"), are being marketed under the name "APS Solutions for Business."

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Program Development

As the Solutions for Business program evolved from start-up to an implementation phase in the second half of 2006, additional program collateral materials were developed, website information and functionality were enhanced, applications and forms were improved, and project tracking and data systems were expanded.

Continuing work to refine and update current materials, and create new program materials resulted in the following creation of and / or changes to collateral materials:

- Trade Ally applications and the Policies and Procedures manual were finalized and posted to the website.
- On-line Prescriptive applications were upgraded to include automatic incentive calculations and data checks.
- Study Report Templates were completed, as well as completed "Sample" applications to use as training tools.
- Frequently Asked Questions document was developed and posted to the website

Marketing and Communications

Marketing activities for the Large Existing Customer program consisted of four areas of focus:

1. **Trade Ally awareness, training and recruitment:** Trade Allies such as HVAC and Lighting contractors are an essential part of the APS Demand Side Management program because they have the opportunity to provide advice to their customers and influence choices in the pivotal "buying stage" for projects. Once experienced with the program, Trade Allies also have the ability to fill out program applications and provide supporting documentation as an added value to their customers. In the second half of 2006, marketing efforts directed toward Trade Allies included:
 - Five Solutions for Business seminars were developed and delivered for Trade Allies. They were held in Flagstaff, Casa Grande, Yuma and Phoenix (two seminars.) Over 4,000 invitations were mailed, and an ad was developed and placed in HVACR Today and the Electric Times to promote the Phoenix seminars. Additionally, a half page article appeared in the same issue, highlighting the program for the trades. Eighty-seven trade allies attended these seminars.
 - In order to encourage Trade Ally participation, a Trade Ally Listing was established on the Solutions for Business program website. An application and approval process was developed so that qualified Trade Allies could be listed. Prerequisites for achieving this listing included attendance at a seminar or one-on-one training by program staff, a contractor's license in good standing and reference checks.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

- One on one meetings with contractors were also pursued to both conduct training on the program and recruit Trade Allies as participants. During this period KEMA met with 23 individual allies in the following trades: air conditioning, lighting, engineering, architecture, building, and energy consulting.
 - Over 150 Trade Allies have been trained and each has received an application for the listing. Twenty Trade Allies have satisfied the program requirements and are listed on the program website. This listing is also intended to be a tool for customers who are looking for contractors with program experience.
2. **Customer awareness and project generation:** Direct marketing to customers is most effective for larger customers, or as a follow up with customers who have heard about the program through other means. Once interested companies have been identified, one-on-one meetings are held to discuss the individual projects and measures. This strategy has resulted in:
- Key Account Customer Training meetings in Metro Phoenix, Yuma, Flagstaff and Casa Grande which introduced the Solutions for Business program to over 150 Large Customers
 - Additional meetings with over 100 large customers to identify projects and provide technical assistance
 - Added focus on public entities such as the State of Arizona, Counties, Cities of Phoenix, Tempe, Glendale, Surprise, Scottsdale, Avondale, Peoria, El Mirage, Sedona and Flagstaff as well as ASU and NAU
3. **Generate Program Awareness through key Trade Shows, Events and Public Relations:** This strategy promotes the program to large numbers of attendees and sets the stage for one-on-one visits for those interested in the program. Venues were chosen for their likelihood to have qualified leads in attendance.
- *Arizona Green Building Expo* – This two-day trade show attracted 1,000 attendees, including customers of all sizes as well as Trade Allies. The Solutions for Business program had a booth at this event with multiple staff members available to address questions and provide program information.
 - *National Association of Industrial and Office Properties Meeting in Phoenix* – Program staff attended this event and provided program information.
 - *Arizona Association of Industries Energy Summit* - The APS Solutions for Business program was a Gold sponsor at the Arizona Association of Industries Energy

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Summit. In addition to presenting the program as part of a panel presentation, Solutions for Business staff presented program materials and answered questions at one of only a handful of booths at the event.

- *Arizona Facilities Management Show* - Solutions for Business program was promoted at the 2-day Facilities Management Show held at the Arizona Cardinal's stadium. This show draws over 1,000 attendees from facilities across Arizona. In addition to marketing to attendees at the booth, team members also visited booths of several potential Trade Allies for recruitment into the program. The Solutions for Business program was also presented to attendees in one of the technical sessions.
- *Written Publications*: Articles were written for Chamber of Commerce newsletters, the October issue of APS' Success Newsletter to business customers, and the trade publications The Electric Times and HVACR Today.

4. **Engage Key Organizations** such as trade associations provide targeted networking opportunities to customers or trade allies who may be predisposed to getting involved with the program. Key organizations engaged by the Solutions for Business program in the second half of 2006 include:

Building Owners and Managers Association (BOMA,) National Association of Industrial and Office Parks, Green Building Council, Arizona Department of Environmental Quality, the Electric League of Arizona, Arizona Energy Engineers, the Air Conditioning Contractors of Arizona, the Arizona Association of Economic Developers and Valley Forward.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PROGRAM: NON-RESIDENTIAL NEW CONSTRUCTION AND MAJOR RENOVATIONS

Description

This program includes three components: design assistance, custom efficiency, and prescriptive measures. Design assistance involves efforts to integrate energy-efficiency into a customer's design process to influence equipment/systems selection and specification as early in the design process as possible. Custom efficiency provides incentives for large non-residential customers and provides feasibility studies to assess the savings from complex applications. Prescriptive incentives are available for energy-efficiency improvements in lighting, HVAC, motors and refrigeration applications.

Program Modifications

No modifications for this reporting period.

Program Goals, Objectives and Savings Targets

- Promote integrated design and integrated analysis of alternative high-efficiency design packages through design assistance in new construction and major renovation applications.
- Assist the customer design team in examining alternative high-efficiency design packages through the provision of the design incentive.
- Encourage facility-specific efficiency improvements through custom incentives that are otherwise difficult to cover in a prescriptive program.
- Encourage the integrated systems approach to incorporating energy-efficiency improvements in new construction and major renovation projects.
- Promote integrated energy efficiency solutions where possible to capture interactive effects and synergistic savings opportunities
- Train commercial qualified contractors to meet APS' standards for installation and operation of high efficiency systems.

According to the ACC Staff's analysis of the new program – for three years, the energy efficiency savings expected to result from the Large New Construction Program could reduce annual peak demand by about 8.8 MW and 729,000 MWh over the life of the measures.

Programs Terminated

No programs were terminated during this reporting period.

Levels of Participation

With ACC approval of this program on February 23, 2006, the New Construction program transitioned from start-up phase for the previous reporting period, to an implementation phase in this reporting period. Long lead times for new construction typically result in a longer ramp up time for program participation. As a result, the participation in the New Construction program is not as robust as in the Large Existing program. A total of 21 applications for New Construction incentives have been received, from 10 unique customers. Eight of the 21 applications are from school districts. As of December 31, 2006, \$62,480 in incentives were paid, and this represents approximately 1.7% of the total incentive budget for New Construction projects. While the program offers a pre-notification process to reserve incentive funds, final applications are only processed after the project is completed and all required documentation is submitted and approved by KEMA.

ARIZONA PUBLIC SERVICE COMPANY

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

Incentive Status for Active Applications	Incentives Paid
Large New Construction – Prescriptive, Custom & Design Assistance	\$62,480
Large New Construction – Feasibility and Commissioning Studies	\$0
Total Large New Construction Funds	\$62,480

During this reporting period, there were no instances that incentives were paid for New Construction related studies for which associated projects were not completed through the verification process.

Evaluation and Monitoring Activities and Results

On April 12, 2006 in Decision No. 68648, the ACC approved funding for Measurement, Evaluation, and Research (MER) activities to assist in verifying the impact and cost effectiveness of APS' DSM programs. APS selected Summit Blue Consulting to conduct program MER activities. Summit Blue Consulting is currently working with APS to develop program research plans. The program research plans will be submitted for Staff review when completed.

Summit Blue has made progress on the MER Research Plan for the New Construction. Summit Blue has also reviewed the implementation contractor's data base and provided feedback for improvements. Field work for evaluation and verification purposes will begin once new construction projects are completed.

kW and kWh Savings

The following table reflects the total energy demand and saving goal and achievements in the second half of 2006 for the Large New Construction Program. Only actual savings from projects that are completed and incentives paid will be counted in this report.

kW Savings	Annual kWh Savings	Lifetime kWh Savings
152	1,237,204	19,928,920

The final savings are adjusted for line losses (9.8%)

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The details for the Performance Incentive calculation are provided in Table 3.

Problems Encountered and Proposed Solutions

Large New Construction projects often have a long lead / lag-time between the design phase, start of construction and complete build-out of a project. There is often an 18 month or longer lead time with new construction projects, and this could affect the timing of savings results and incentives paid in this program.

ARIZONA PUBLIC SERVICE COMPANY

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

Costs Incurred

Costs incurred for this program during the current reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement*	Program Marketing	Planning & Admin	Program Total Cost
Large Non Res New Const	\$62,480	\$3,072	\$1,957	\$649,501	\$7,712	\$50,840	\$775,562

*The following table provides a more detailed breakdown of the IC costs, which are included in the Program Implement column above.

DSM Program	IC - Implementation	IC - Marketing	IC - Education	IC - Technical Services	IC - Total Cost
Large Non Res New Const	\$306,294	\$172,051	\$50,582	\$120,573	\$649,501

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

Other Significant Information

APS hired KEMA to implement the Small Non-Residential, Large Existing Facilities, New Construction & Major Renovation and Schools Programs. The Implementation Contractor (IC) began program activities on March 1, 2006. All of the Non-Residential Programs, except for the "BOT" program are being marketed under the name "Solutions for Business"

Program Development

As the Solutions for Business program evolved from start-up to an implementation phase in the second half of 2006, additional program collateral materials were developed, website information and functionality were enhanced, applications and forms were improved, and project tracking and data systems were expanded. Continuing work to refine and update current materials, and create new program materials resulted in the following creation of and/ or changes to collateral materials:

- Trade Ally applications and the Policies and Procedures manual were finalized and posted to the website.
- On-line Prescriptive applications were upgraded to include automatic incentive calculations and data checks.
- Study Report Templates were completed, as well as completed "Sample" applications to use as training tools.
- Frequently Asked Questions document was developed and posted to the website

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Marketing and Communications

Marketing activities for the Large Non-Residential New Construction program consisted of four areas of focus:

1. **Trade Ally awareness, training and recruitment:** Trade Allies such as Architects, Engineering firms, Construction firms, and HVAC and Lighting contractors are an essential part of a New Construction program because they have the opportunity to provide advice to their customers and influence choices in the pivotal design and planning stages for projects. Once experienced with the program, Trade Allies also have the ability to fill out program applications and provide supporting documentation as an added value to their customers. In the second half of 2006, marketing efforts directed toward Trade Allies included:
 - Five Solutions for Business seminars were developed and delivered for Trade Allies. They were held in Flagstaff, Casa Grande, Yuma and Phoenix (two seminars.) One of the Phoenix seminars focused exclusively on Architect and Engineering firms. Over 4,000 invitations were mailed, and an ad was developed and placed in HVACR Today and the Electric Times to promote the Phoenix seminars. Additionally, a half page article appeared in the same issue, highlighting the program for the trades. Eighty-seven trade allies attended these seminars.
 - In order to encourage Trade Ally participation, a Trade Ally Listing was established on the Solutions for Business program website. An application and approval process was developed so that qualified Trade Allies could be listed. Prerequisites for achieving this listing included attendance at a seminar or one-on-one training by program staff, a contractor's license in good standing and reference checks.
 - The New Construction focus has been on meeting with architecture/engineering firms, builders and developers to influence the decision making early in the building process.
 - One on one meetings with contractors were also pursued to both conduct training on the program and to recruit Trade Allies as participants. During this period KEMA met with 23 individual allies in the following trades: air conditioning, lighting, engineering, architecture, building, and energy consulting.
 - Over 150 Trade Allies have been trained and each has received an application for the listing. Twenty Trade Allies have satisfied the program requirements and are listed on the program website. This listing is also intended to be a tool for customers who are looking for contractors with program experience.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

2. **Customer awareness and project generation:** Direct marketing to customers is most effective for larger customers, or to follow up with customers who have heard about the program through other means. Once interested companies have been identified, one-on-one meetings are held to discuss the individual projects and measures. This strategy has resulted in:
- Key Account Customer Training meetings in Metro Phoenix, Yuma, Flagstaff and Casa Grande which introduced the Solutions for Business program to over 150 Large Customers
 - Additional meetings with over 100 large customers to identify projects and provide technical assistance
 - Added focus on public entities who are more likely to own and operate their facilities, such as the State of Arizona, Counties, Cities of Phoenix, Tempe, Glendale, Surprise, Scottsdale, Avondale, Peoria, El Mirage, Sedona and Flagstaff as well as ASU and NAU.
3. **Generate Program Awareness through key Trade Shows, Events and Public Relations:** This strategy promotes the program to large numbers of attendees and sets the stage for one-on-one visits for those interested in the program. Venues were chosen for their likelihood to have qualified leads in attendance.
- *Arizona Green Building Expo* – This two-day trade show attracted 1,000 attendees, including customers of all sizes as well as Trade Allies. The Solutions for Business program had a booth at this event with multiple staff members available to address questions and provide program information.
 - *National Association of Industrial and Office Properties Meeting in Phoenix* – Program staff attended this event and provided program information.
 - *Arizona Association of Industries Energy Summit* - The APS Solutions for Business program was a Gold sponsor at the Arizona Association of Industries Energy Summit. In addition to presenting the program as part of a panel presentation, Solutions for Business staff presented program materials and answered questions at one of only a handful of booths at the event.
 - *Arizona Facilities Management Show* - Solutions for Business program was promoted at the 2-day Facilities Management Show held at the Arizona Cardinal's stadium. This show draws over 1,000 attendees from facilities across Arizona. In addition to marketing to attendees at the booth, team members also visited booths of several potential Trade Allies for recruitment into the program. The Solutions for Business program was also presented to attendees in one of the technical sessions.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

4. **Engage Key Organizations** such as trade associations provide targeted networking opportunities to customers or trade allies who may be predisposed to getting involved with the program. Key organizations engaged by the Solutions for Business program in the second half of 2006 include:
- Building Owners and Managers Association (BOMA,) National Association of Industrial and Office Parks, Green Building Council, Arizona Department of Environmental Quality, the Electric League of Arizona, Arizona Energy Engineers, the Air Conditioning Contractors of Arizona, the Arizona Association of Economic Developers and Valley Forward.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PROGRAM: SMALL BUSINESS PROGRAM

Description

The Small Non-Residential Program provides prescriptive incentives for small non-residential customers (<200 kW of aggregated demand) 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. In addition, the program provides educational and promotional materials designed to assist building owners and lease-holders in making decisions to improve the energy-efficiency of their facilities.

Program Modifications

No modifications for this reporting period.

Program Goals, Objectives and Savings Targets

- Provide Demand Side Management opportunities for small non-residential customers
- Promote the installation of high-efficiency lighting, packaged HVAC equipment, motors, and refrigeration systems
- Increase the availability of trained and qualified contractors and service technicians who are knowledgeable about systems performance issues, proper testing, operation and commissioning techniques, and the importance of energy and comfort conditioning benefits of systems that are properly installed and operated
- Promote cross-training and energy-efficiency assessment and referral opportunities among HVAC and lighting contractors

According to the ACC Staff's analysis of the new program – for three years, the energy efficiency savings expected to result from the Small Non-Residential Program could reduce annual peak demand by about 6.5 MW and 571,000 MWh over the life of the measures.

Programs Terminated

No programs were terminated during this reporting period.

Levels of Participation

With ACC approval of this program on February 23, 2006, the Small Business program transitioned from start-up phase for the previous reporting period, to an implementation phase in this reporting period. As reported in the previous semi annual report, the small business sector is difficult to reach and often requires greater incentives than other markets. A total of 37 applications for Small Business incentives have been received from 21 unique customers. One of the 37 applications is from a school district. As of December 31, 2006, \$62,240 in incentives were paid, and this represents approximately 2.8% of the total incentive budget for Small Business projects. While the program offers a pre-notification process to reserve incentive funds, final applications are only processed after the project is completed and all required documentation is submitted and approved by KEMA.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Incentive Status for Active Applications	Incentives Paid
Small Business	\$62,240

Evaluation and Monitoring Activities and Results

On April 12, 2006 in Decision No. 68648, the ACC approved funding for Measurement, Evaluation, and Research (MER) activities to assist in verifying the impact and cost effectiveness of APS' DSM programs. APS selected Summit Blue Consulting to conduct program MER activities. Summit Blue Consulting is currently working with APS to develop program research plans. The program research plans will be submitted for Staff review when completed.

Summit Blue has made progress on the MER Research Plan for the Small Business. Summit Blue has also reviewed the implementation contractor's data base and provided feedback for improvements. Field work for evaluation and verification purposes will begin soon on small business projects that have been completed.

kW and kWh Savings

The following table reflects the total energy demand and saving goal and achievements in the second half of 2006 for Small Businesses. Only actual savings from projects that are completed and incentives paid will be counted in this report.

kW Savings	Annual kWh Savings	Lifetime kWh Savings
118	667,738	10,273,974

Final savings are adjusted for line losses (9.8%)

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The details for the Performance Incentive calculation are provided in Table 3.

Problems Encountered and Proposed Solutions

- Low initial participation from small customers: Small businesses are frequently hard to reach through traditional approaches to promoting energy efficiency programs. In the last 6 months of 2006, this program was promoted to Trade Allies, which includes contractors for lighting and HVAC equipment installation that often service the small business market segment. While some progress was made, small business participation remains low. This marketing channel will continue to be worked aggressively. However, program changes will likely be needed to achieve higher penetration levels in this market segment.
- KEMA has identified that the incentive levels currently being offered are lower than those of many other successful energy efficiency programs targeted to small businesses. For example:
 - The EZ-Turnkey Program offered by San Diego Gas and Electric provided incentives equal to 100% of the full retrofit costs to their small business facilities with peak demand below 20 kW.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

- The B.E.S.T. Program implemented in various cities throughout California paid between 75% and 100% of the full retrofit costs for small business facilities with peak demand below 100 kW.
- The Small Business Energy Advantage Program offered by Northeast Utilities pays 50% of the lighting retrofit costs and 100% of non lighting retrofits costs. The program also provides a financing option for the portion of the lighting retrofit project to be paid by the small business.
- The Small Business Solutions Program offered by NSTAR offers a free energy audit to identify energy saving opportunities, and will also pay up to 80% of the total cost for retrofitting qualifying lighting and mechanical systems to customers whose average monthly demand is 100 kW or less.
- Massachusetts Electric and Nantucket Electric provide free audits and up to 75% of the cost of installation for energy saving improvements through their Small Business Energy Efficiency Program, which is open to customers with an average demand of 200 kW or less.
- Additional marketing efforts have been identified which will be implemented in 2007 to reach small businesses and the effectiveness of these efforts will be monitored.
- This issue will be addressed with recommended solutions in the 13 month filing, due on March 23, 2007.

Costs Incurred

Costs incurred for this program during the current reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement*	Program Marketing	Planning & Admin	Program Total Cost
Small Business	\$62,240	\$0	\$1,471	\$356,283	\$6,955	\$26,804	\$453,752

*The following table provides a more detailed breakdown of the IC costs, which are included in the Program Implement column above.

DSM Program	IC - Implementation	IC - Marketing	IC - Education	IC - Technical Services	IC - Total Cost
Small Business	\$187,028	\$113,483	\$28,230	\$27,541	\$356,283

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Other Significant Information

APS hired KEMA to implement the Small Non-Residential, Large Existing Facilities, New Construction & Major Renovation and Schools Programs. The Implementation Contractor (IC) began program activities on March 1, 2006. All of the Non-Residential Programs, except for the "BOT" Program are being marketed under the name "Solutions for Business."

Program Development

As the Solutions for Business program evolved from start-up to an implementation phase in the second half of 2006, additional program collateral materials were developed, website information and functionality were enhanced, applications and forms were improved, and project tracking and data systems were expanded. Continuing work to refine and update current materials, and create new program materials resulted in the following creation of and/ or changes to collateral materials:

- Trade Ally applications and the Policies and Procedures manual were finalized and posted to the website.
- Project applications were updated to change HVAC qualifications from EER to IPLV and to revise the Diagnostic Tune Up measure name to HVAC Testing and Repair and add an economizer repair measure. The HVAC Services Supplement for the Testing and Repair was finalized and made available.
- On-line Prescriptive applications were upgraded to include automatic incentive calculations and data checks.
- Study Report Templates were completed, as well as completed "Sample" applications to use as training tools.
- Frequently Asked Questions document was developed and posted to the website.

Marketing and Communications

Marketing activities for the Small Non-residential Customer program consisted of four areas of focus:

1. **Trade Ally awareness, training and recruitment:** Trade Allies such as HVAC and Lighting contractors are an essential part of any Demand Side Management program because they have the opportunity to provide advice to their customers and influence choices in the pivotal "buying stage" for projects. This group is especially useful in reaching small business. Once experienced with the program, Trade Allies also have the ability to fill out program applications and provide supporting documentation as an added value to their customers. In the second half of 2006, marketing efforts directed toward Trade Allies included:
 - Five Solutions for Business seminars were developed and delivered for Trade Allies. They were held in Flagstaff, Casa Grande, Yuma and Phoenix (two seminars.) Over 4,000 invitations were mailed, and an ad was developed and placed in HVACR Today and the Electric Times to promote the Phoenix seminars. Additionally, a half page article appeared in the same issue, highlighting the program for the trades. Eighty-seven trade allies attended these seminars.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

- In order to encourage Trade Ally participation, a Trade Ally Listing was established on the Solutions for Business program website. An application and approval process was developed so that qualified Trade Allies could be listed. Prerequisites for achieving this listing included attendance at a seminar or one-on-one training by program staff, a contractor's license in good standing and reference checks.
- One on one meetings with contractors were also pursued to both conduct training on the program and recruit as Trade Allies. During this period KEMA met with 23 individual allies in the following trades: air conditioning, lighting, engineering, architecture, building, and energy consulting.
- Over 150 Trade Allies have been trained and each has received an application for the listing. Twenty Trade Allies have satisfied the program requirements and are listed on the program website. This listing is also intended to be a tool for customers who are looking for contractors with program experience.

2. **Customer awareness and project generation:** The first step of marketing the program is creating awareness among small companies which can be done on a large scale. Once interested companies have been identified, one on one meetings are held to discuss the individual projects and measures. This has been particularly challenging in the case of small businesses. They need to first be educated on the benefits on energy efficiency before they are interested in learning about the Solutions for Business program. To achieve this, the following strategy has been developed:

- Held meetings with APS Economic Development, Community Development and AAAME teams to develop a strategic plan for 2007.
- A more tactical plan to reach small businesses has been developed and will start January 2007. This initiative leverages existing APS relationships among Chambers of Commerce, downtown community redevelopment groups, cities and other organizations which reach small businesses on a regular basis. In the first two quarters each geographic area in the state will be covered, using outreach through group newsletters, presentations, radio and print opportunities. Specific collateral materials that speak to small business are being developed to support this effort.
- Meetings with city staff in the areas of economic development and permitting will also be targeted as a distribution point for information and materials. As an example, the City of Avondale has already agreed to stock Solutions for Business brochures in their business permitting office.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

3. **Generate Program Awareness through key Trade Shows, Events and Public Relations:** This strategy promotes the program to large numbers of attendees and sets the stage for one-on-one visits for those interested in the program. Venues were chosen for their likelihood to have qualified leads in attendance. Chambers of Commerce have been specifically identified as a key point of contact with small businesses, and other opportunities include the following.
- a. *Prestamos Seminario* – This Hispanic small business tradeshow was an outreach to minority businesses. The Solutions for Business program had a booth at this event with multiple staff members available to address questions and provide program information.
 - b. *East Valley Chamber of Commerce Business Expo* – Program staff attended this event and provided program information to potential clients.
 - c. *Phoenix Chamber of Commerce Business Expo* - The APS Solutions for Business program had a booth at this event with staff members available to address questions and provide program information.
 - d. *Governor's Council on Small Business* - Solutions for Business program was allowed to give a presentation and distribute program flyer. This resulted in an invitation in rural Arizona for a radio program that focuses on small businesses.
 - e. *Written Publications:* Articles were written for Chamber of Commerce newsletters, the October issue of APS' Success Newsletter to business customers, and articles in both The Electric Times and HVACR Today.
4. **Engage Key Organizations** such as trade associations provide targeted networking opportunities to customers or trade allies who may be predisposed to getting involved with the program. Key organizations engaged by the Solutions for Business program in the second half of 2006 include:
- Many small businesses are located within multi-tenant building, so Building Owners and Managers Association (BOMA,) National Association of Industrial and Office Parks have been targeted.
 - Green Building Council, Arizona Association of Economic Developers, Arizona Energy Engineers, the Air Conditioning Contractors of Arizona, the Arizona Association of Economic Developers and Valley Forward all have members or extensive contact with small businesses.
 - Several partnerships with organizations are being investigated including: Arizona Department of Environmental Quality Prevention Pollution program and their Arizona Green Business/Green Schools programs and training programs with the Electric League of Arizona.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PROGRAM: BUILDING OPERATOR TRAINING PROGRAM ("BOT")

Description

The Building Operator Training Program ("BOT") provides training incentives for building operators (managers) and facility maintenance technicians on energy-efficient building operating and maintenance practices.

Program training is 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 ELA issues a certificate of completion for participants that successfully complete Facility Maintenance Technician Training and Building Operator Training.

Program Modifications

No modifications for this reporting period.

Program Goals, Objectives and Savings Targets

- Promote operation and maintenance practices that increase the energy-efficiency of commercial and industrial facilities.
- Help participants understand general utility rate concepts and energy consumption.
- Institute a preventative maintenance program in their facility, which includes written maintenance logs that must be completed periodically. Include checks for efficient equipment operation (i.e., economizer/dampers for leaks, coil cleaning, air filter cleaning, system balancing, controls, etc.).
- Learn how to perform an energy audit of their facility and identify savings opportunities
- Learn to create reports for management that justify energy-efficiency capital expenses intended to produce O&M savings.
- Improve purchasing requirements by knowing what to look for when repairing or replacing equipment, and how to calculate the payback of energy savings associated with purchase options; and
- Provide a mechanism for channeling participation to the APS Business Solutions Program.

According to the ACC Staff's analysis of the new program – for three years, the energy efficiency savings expected to result from the BOT Program could reduce annual peak demand by about 6.43 MW and 81,000 MWh over the life of the measures.

Programs Terminated

No programs were terminated during this reporting period.

Levels of Participation

The BOT Program had twelve APS customer participants in the Fall 2006 Building Operator Training session, and all twelve successfully received a passing grade from the Electric League of Arizona (ELA) and received their BOT Certificate of completion. The training subsidy paid to the ELA to cover the tuition subsidy for APS customer participation totaled \$7,170 or \$598 per participant.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

The BOT Program also had twenty-six APS customer participants in the Fall 2006 Facilities Maintenance Training session, and twenty-four successfully received a passing grade from the ELA. The FMT subsidy paid to the ELA to cover the tuition subsidy for APS customers was \$10,740 or \$447.50 per passing customer.

Evaluation and Monitoring Activities and Results

On April 12, 2006 in Decision No. 68648, the ACC approved funding for Measurement, Evaluation, and Research (MER) activities to assist in verifying the impact and cost effectiveness of APS' DSM programs. APS selected Summit Blue Consulting to conduct program MER activities. Summit Blue Consulting is currently working with APS to develop program research plans. The program research plans will be submitted for Staff review when completed.

Summit Blue has made progress on the MER Research Plan for the BOT. Specific MER activities to improve the process in the BOT Program for this reporting period includes the following:

- Completed depth interviews with 4 instructors for the Building Operator Certification, Facility Maintenance Technician and HVAC Contractor Training programs offered through the Electric League of Arizona.
- Completed depth interviews with 9 out of 12 class participants in the Fall Building Operator Certification Program.
- Completed initial depth interviews with program implementers, the Electric League of Arizona.
- Reviewed program marketing efforts and a sample of program training materials and are developing a report on anecdotal observations based on qualitative research completed to date.

Provided baseline questions that were subsequently added to the application that ELA provides to class participants to receive incentives from APS for program participation.

kW and kWh Savings

Participants	Est. Measure Life (yrs)	kWh Savings per Year*	Lifetime kWh Savings	kW Demand Savings *
BOT = 12	15	88,516	1,327,746	11.46
FMT = 24	15	177,033	2,655,491	22.93

* Annual energy and demand savings per participant approved equals 6,718 kWh and .87 kW. The final savings are adjusted for line losses (9.8%).

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The details for the Performance Incentive calculation are provided in Table 3.

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:
JULY THROUGH DECEMBER 2006**

Costs Incurred

Costs incurred for this program during the current reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement	Program Marketing	Planning & Admin	Program Total Cost
Building Operator Training	\$0	\$17,910	\$0	\$10,757	\$4,360	\$1,186	\$34,213

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

Other Significant Information

None.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PROGRAM: ENERGY INFORMATION SERVICES ("EIS") PROGRAM

Description

The EIS Program helps large customers (>200 kW) save energy by giving them a better understanding and control of their facilities' electric use. EIS provides data not only regarding usage and demand, but also when, where and how much power is used in specific areas of each facility. This detailed information allows customers to fine-tune equipment use and operations and to document the impact of those changes. Participating customers monitor their electric usage through a web-based energy information system that allows them to receive historical (previous day) 15 minute usage and demand graphics. This information can be used to improve or monitor energy usage patterns, reduce energy use, reduce demands during on-peak periods and better manage their overall energy operations.

APS is encouraging customers to take advantage of EIS by providing a one-time incentive of up to a maximum of \$900 or 75% of the cost of installing a meter and communications equipment necessary to participate in the program.

Program Modifications

No modifications for this reporting period.

Program Goals, Objectives and Savings Targets

- Provide monthly energy usage information to large non-residential customers.
- Identify strategies to lower energy cost by reducing energy usage and demand.
- Educate EIS program participants about utility rate concepts and how managing or reducing their energy consumption through energy-efficiency measures and operational practices can reduce their energy expenses.
- Teach participants how to download billing history information and create spreadsheets to chart and graph their energy use, as well as identify consumption trends and savings opportunities.
- Educate EIS participants about creating reports for management that justify energy-efficient capital expenses intended to produce operations and maintenance ("O&M") savings; and
- Facilitate analysis of what-if scenarios to help large facility managers assess the benefits of capital improvements or operating adjustments to improve energy-efficiency.

According to the ACC Staff's analysis of the new program – for three years, the energy efficiency savings expected to result from the EIS Program could reduce annual peak demand by about 3.57 MW and 45,000 MWh over the life of the measures.

Programs Terminated

No programs were terminated during this reporting period.

Levels of Participation

No participation to report, as the EIS program was started in late 2006.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Evaluation and Monitoring Activities and Results

On April 12, 2006 in Decision No. 68648, the ACC approved funding for Measurement, Evaluation, and Research (MER) activities to assist in verifying the impact and cost effectiveness of APS' DSM programs. APS selected Summit Blue Consulting to conduct program MER activities. Summit Blue Consulting is currently working with APS to develop program research plans. The program research plans will be submitted for Staff review when completed.

kW and kWh Savings

No savings to report during this period.

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The details for the Performance Incentive calculation are provided in Table 3. Since there were no kW or kWh savings to date, the EIS program benefits are zero to date.

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

Costs Incurred

Costs incurred for the EIS Program during the second half of 2006 were \$10,094 for program administration expenses and \$12,971 for program implementation expenses.

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

Other Significant Information

Automated Energy was selected as the implementation contractor for the EIS program through a competitive RFP process in the last quarter of 2006. Automated Energy will provide turn-key implementation services for the program. The program was launched on November 16th.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PROGRAM: SCHOOLS PROGRAM

Description

The Schools program includes a set-aside budget for schools and provides assistance in reducing the energy used in school buildings, including public, private and charter schools. The incentives available for schools include the same DSM measures that are available for all non-residential customers.

Program Modifications

No modifications for this reporting period.

Program Goals, Objectives and Savings Targets

- Maximize the energy savings that can be attained with available DSM funds by providing schools incentives to upgrade lighting, HVAC, and refrigeration systems.
- Provide educational and training materials to aid schools in other energy conservation projects.
- Provide design assistance, commissioning and energy feasibility incentives to aid schools in identifying energy savings opportunities.
- Provide incentives for other cost effective DSM projects by allowing schools to participate in any Non-Residential DSM Program.

According to the ACC Staff's analysis of the new program – for three years, the energy efficiency savings expected to result from the lighting component of the Schools Program alone could reduce annual peak demand by about 6.37 MW and 178,000 MWh over the life of the measures. Staff also indicated to the extent that other cost-effective measures would be undertaken by Schools, additional savings could accrue.

Programs Terminated

No programs were terminated during this reporting period.

Levels of Participation

A total of 31 applications from schools have been received, from 12 unique school districts. The self-reported size of the school entity, based on the number of students as submitted on approved applications is:

Name of School	Project Type	Size	No. of Students in District
Mammoth San Manuel Unified School District	Prescriptive Measures – Retrofit	>200 kW	1,400
Scottsdale Unified School District	Prescriptive Measures – Retrofit	>200 kW	28,000
Wilson Elementary Schools	Prescriptive & Custom Measures – Retrofit	>200 kW	1,250
Canon Elementary School District #50	Prescriptive Measures – Retrofit	>200 kW	186

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Palo Verde Schools	Prescriptive Measures – Retrofit	>200 kW	420
Deer Valley Unified School District	Prescriptive & Custom Measures – Retrofit	>200 kW	35,743
Casa Grande Elementary School District	Prescriptive Measures – Retrofit	>200 kW	7,240
Dysart Unified School District #89	Prescriptive & Custom Measures – Retrofit	>200 kW	18,000
Paradise Valley Unified SD #69	Prescriptive & Custom Measures – Retrofit	>200 kW	34,226
Gilbert Unified SD	Prescriptive Measures – Retrofit	>200 kW	37,539

When an incentive application is received from a school district and deemed eligible, funding is first allocated from the Schools budget, subject to the \$25,000 or \$15/student cap. Any additional funding required to cover the application is then allocated from the appropriate Large Existing, New Construction or Small Business Program budget.

During this reporting period, \$262,836 in incentives were paid to schools. The Schools Program incentives of \$73,380 were paid under the schools cap and account for 6.5% of the program incentive budget for schools. The remaining \$189,456 in incentives were paid to schools under the Large Existing Program (see the table below).

Incentive Status by Fund for Active Applications	Incentives Paid
Schools Budget – Prescriptive & Custom	\$73,380
Schools Budget – Feasibility, Commissioning and Retro-commissioning Studies	\$0
Total School Funds	\$73,380
Schools Summary:	
Schools – School Funds	\$73,380
Schools – Large Existing Funds	\$189,456
Schools – New Construction Funds	\$0
Schools – Small Business Funds	\$0
Total Allocated for Schools	\$262,836

During this reporting period, there were no instances that incentives were paid for studies for which associated projects were not completed through the verification process.

Evaluation and Monitoring Activities and Results

On April 12, 2006 in Decision No. 68648, the ACC approved funding for Measurement, Evaluation, and Research (MER) activities to assist in verifying the impact and cost effectiveness of APS' DSM programs. APS selected Summit Blue Consulting to conduct program MER activities. Summit Blue Consulting is currently working with APS to develop program research plans. The program research plans will be submitted for Staff review when completed.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Summit Blue has made progress on the MER Research Plan for the Schools. Summit Blue has also reviewed the implementation contractor's data base and provided feedback for improvements. Field work for evaluation and verification purposes began with onsite inspections on a lighting project completed for the Paradise Valley Unified School District.

kW and kWh Savings

The following table reflects the total energy demand and saving goal and achievements in the second half of 2006 for schools projects. Only actual savings from projects that are completed and incentives paid will be counted in this report.

	kW Savings	Annual kWh Savings	Lifetime kWh Savings
Schools – School Funds	126	693,600	13,290,926
Schools – Large Existing Funds	515	2,359,951	42,144,467
Schools – New Construction Funds	0	0	0
Schools – Small Business Funds	0	0	0
Total Attributable to Schools	641	3,053,551	55,435,393

Final savings are adjusted for line losses (9.8%).

Benefits and Net Benefits/Performance Incentive Calculation

The benefits and net benefits are provided in Table 2. The details for the Performance Incentive calculation are provided in Table 3.

Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

Costs Incurred

Program costs incurred during the second half of 2006 are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implement*	Program Marketing	Planning & Admin	Program Total Cost
Schools	\$73,380	\$0	\$143	\$77,126	\$416	\$10,619	\$161,685

* The following details the IC costs, which are included in the Program Implement column above.

DSM Program	Implementation	Marketing	Education	Technical Services	Program Total Cost
Schools	31,871	\$27,720	\$5,460	\$12,075	\$77,126

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

Other Significant Information

APS hired KEMA to implement the Schools Program. KEMA provides direct outreach to school districts, and it has also established an agreement with the Arizona Department of Commerce Energy Office to provide additional outreach and education to all school districts with a focus on outreach to rural areas. The Energy Office already had an established data base of Arizona school districts with contact information and a policy of meeting at least once per year with each district. All Non-Residential Programs, including the Schools program, are being marketed under the name "Solutions for Business."

Program Development

As the Solutions for Business program evolved from start-up to an implementation phase in the second half of 2006, additional program collateral materials were developed, website information and functionality were enhanced, applications and forms were improved, and project tracking and data systems were expanded. Continuing work to refine and update current materials, and create new program materials resulted in the following creation of and/ or changes to collateral materials:

- Trade Ally applications and the Policies and Procedures manual were finalized and posted to the website.
- On-line Prescriptive applications were upgraded to include automatic incentive calculations and data checks.
- Study Report Templates were completed, as well as completed "Sample" applications to use as training tools.
- Frequently Asked Questions document was developed and posted to the website.

Marketing and Communications

Marketing activities for the Schools program consisted of four areas of focus:

1. **Trade Ally awareness, training and recruitment:** Trade Allies such as Architects, Design Engineers, HVAC and Lighting contractors are an essential part of any Demand Side Management program because they have the opportunity to provide advice to schools and influence choices in the pivotal design or buying stages for projects. Once experienced with the program, Trade Allies also have the ability to fill out program applications and provide supporting documentation as an added value to their customers. In the second half of 2006, marketing efforts directed toward Trade Allies included:

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

- a. Five Solutions for Business seminars were developed and delivered for Trade Allies. They were held in Flagstaff, Casa Grande, Yuma and Phoenix (two seminars.) Over 4000 invitations were mailed, and an ad was developed and placed in HVACR Today and the Electric Times to promote the Phoenix seminars. Additionally, a half page article appeared in the same issue, highlighting the program for the trades. Eighty-seven trade allies attended these seminars.
 - b. In order to encourage Trade Ally participation, a Trade Ally Listing was established on the Solutions for Business program website. An application and approval process was developed so that qualified Trade Allies could be listed. Prerequisites for achieving this listing included attendance at a seminar or one-on-one training by program staff, a contractor's license in good standing and reference checks.
 - c. One-on-one meetings with contractors were also pursued to both conduct training on the program and recruit as Trade Allies. During this period KEMA met with 23 individual allies in the following trades: air conditioning, lighting, engineering, architecture, building, and energy consulting.
 - d. Over 150 Trade Allies have been trained and each has received an application for the listing. Twenty Trade Allies have satisfied the program requirements and are listed on the program website. This listing is also intended to be a tool for customers who are looking for contractors with program experience.
2. **School District awareness and project generation:** Direct marketing to school districts included one-on-one meetings with both rural and metro school districts. A list of specific school district involvement is included in the Schools Program Activities section of this report, below.
3. **Generate Program Awareness through key Trade Shows, Events and Public Relations:** This strategy promotes the program to large numbers of attendees and sets the stage for one-on-one visits for those interested in the program. Venues were chosen for their likelihood to have qualified leads in attendance.
- a. *Arizona Green Building Expo* – This two-day trade show attracted 1,000 attendees, including customers of all sizes as well as Trade Allies. The Solutions for Business program had a booth at this event with multiple staff members available to address questions and provide program information.
 - b. *Arizona Facilities Management Show* - Solutions for Business program was promoted at the 2-day Facilities Management Show held at the Arizona Cardinals stadium. This show draws over 1,000 attendees from facilities across Arizona. In addition to marketing to attendees at the booth, team members also visited booths of several potential Trade Allies for recruitment into the program. The Solutions for Business program was also presented to attendees in one of the technical sessions.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

- c. *Written Publications:* Articles were written for Chamber of Commerce newsletters, the October issue of APS' Success Newsletter to business customers, and the trade publications The Electric Times and HVACR Today.

4. Engage Key Organizations such as trade associations provide targeted networking opportunities to schools or trade allies who may be predisposed to getting involved with the program. Key organizations engaged by the Solutions for Business program in the second half of 2006 include:

- Green Building Council, Arizona Association of Economic Developers, Arizona Department of Environmental Quality, the Electric League of Arizona, Arizona Energy Engineers, the Air Conditioning Contractors of Arizona, and Valley Forward.

Schools Program Activities in this Reporting Period include:

School Districts have demonstrated a healthy level of program participation in the last six months. One rural and three metro school districts received incentive payments. Of those, Paradise Valley and Deer Valley USD's received the largest incentive payments across all program segments.

On November 16, APS attended a Paradise Valley USD board meeting for a ceremonial check presentation of \$107,857 to the district. Approximately fifty people were in attendance.

Deer Valley received \$131,598 in incentives in 2006, which was the highest amount received by any customer across all programs.

The tables below lists the districts APS has discussions with or paid incentives to through its outreach efforts:

-Rural and Non-metro

- Camp Verde Unified School District
- Casa Grande Elementary School District
- Canon Elementary School District
- Flagstaff Unified School District
- Humboldt Unified School District
- Mammoth San Manuel Unified School District
- Mayer Unified School District
- Payson School District
- Prescott Unified School District
- Sedona – Oak Creek Joint Unified School District
- Superior Unified School District
- Tuba City Unified School District
- Willow Creek Charter School in Prescott

-Metro Phoenix

- Agua Fria Union High School District
- Deer Valley Unified School District
- Desert Heights Charter School of Glendale

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

- Dysart Unified School Dist #89
- Liberty School District
- Litchfield Elementary School District
- Murphy Elementary School District
- Osborn School District
- Palo Verde Schools
- Paradise Valley Unified School District
- Phoenix Elementary School District No 1
- Roman Catholic Diocese in Phoenix
- Schools for Tesseract School
- Scottsdale Unified School District
- Tempe School District #3

In addition to individual school district outreach, program staff held multiple meetings with the Arizona School Facilities Board. The program was presented to SFB staff members, and at follow up meetings.

We also provided further training and assisted SFB staff members in incorporating the Solutions for Business program in their new construction and renovation plans for Arizona schools. The SFB has since increased their requirements for new schools. They must now meet the ASHRAE 90.1-2004 Energy Standard for new construction. The Architect/Engineering team must provide a COMcheck report saying that they have met the requirements. The SFB has decided that they will require SEER 13 package units and will pay for SEER 14 if incentives are available. They will also pay for premium T8 lighting. Many of their recommendations mirror the APS Incentive program.

An announcement about the Solutions for Business program went out to all Charter Schools in September. In addition, the Energy Office staff presented the APS program at the "call to the public" at the November monthly meeting of the State Board for Charter Schools.

ARIZONA PUBLIC SERVICE COMPANY

DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD: JULY THROUGH DECEMBER 2006

PORTFOLIO PLANNING: DSM MEASUREMENT, EVALUATION AND RESEARCH

Description

There are currently two major efforts within Measurement, Evaluation and Research (MER):

- Baseline and Market Potential Study.
- Ongoing Measurement and Evaluation of the current DSM programs

The Baseline and Market Potential Study is currently being finalized. This study will identify current baseline efficiency levels and the market potential of DSM measures.

Summit Blue has been hired to provide the DSM program Measurement and Evaluation services. These Measurement and Evaluation activities will:

- perform process evaluation to indicate how well programs are working to achieve objectives,
- verify that energy-efficient measures are installed as expected,
- track savings measurement to monitor the actual program savings that are achieved,
- research activities to identify additional opportunities for energy efficiency.

In addition to these activities Summit Blue is also providing evaluation support for the 13 Month Filing that is due on March 23, 2007.

The approach for measurement and evaluation of the DSM programs will be to integrate data collection and tracking activities directly into the program implementation process.

Program Modifications

Not applicable.

Program Goals, Objectives and Savings Targets

Not applicable.

Programs Terminated

Not applicable.

Levels of Participation

Not applicable.

Evaluation and Monitoring Activities and Results

The Baseline and Market Potential Study is being finalized by ICF Consulting and will be completed in the first quarter of 2007. The DSM program Measurement and Evaluation activities have been kicked off during the second half of 2006. Research plans are under development and will be finalized in the first quarter of 2007. The process evaluation and verification of savings is an ongoing activity and will continue through 2007. See specific program sections for additional information.

kW and kWh Savings

Not applicable.

ARIZONA PUBLIC SERVICE COMPANY

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

Benefits and Net Benefits/ Performance Incentive Calculation

Not applicable.

Problems Encountered and Proposed Solutions

Not applicable.

Costs Incurred

Total costs incurred for Measurement and Evaluation during this reporting period were \$326,510.

Findings from all Research Projects

APS is currently completing work on a DSM Baseline and Market Potential study that was approved in Decision No. 67816. A final report is expected to be completed in the first quarter of 2007.

Other Significant Information

None.

ARIZONA PUBLIC SERVICE COMPANY

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

**Table 4
DSM Program Expenses: January – December 2006**

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Program Total Cost	
Residential								
Low Income	\$469,626	\$4,610	\$2,984	\$72,938	\$4,815	\$63,797	\$618,770	
Res Existing Homes HVAC	\$439,400	\$69,140	\$144,512	\$103,969	\$266,271	\$33,134	\$1,056,425	
Res New Home Construction	\$65,602	\$58,990	\$6,686	\$53,318	\$220,696	\$57,878	\$463,170	
Consumer Products	\$1,356,929	\$0	\$1,582	\$337,232	\$139,045	\$73,164	\$1,907,951	
Totals for Residential	\$2,331,557	\$132,740	\$155,764	\$567,457	\$630,826	\$227,973	\$4,046,316	
Non-Residential								
Large Existing Facilities	\$759,971	\$2,446	\$4,638	\$739,337	\$8,298	\$125,640	\$1,640,330	
Large Non Res New Const	\$62,480	\$3,072	\$2,064	\$928,981	\$8,160	\$120,469	\$1,125,226	
Small Business	\$62,240	\$0	\$1,550	\$509,006	\$7,371	\$62,602	\$642,769	
Bldg Operator Training	\$0	\$23,287	\$0	\$10,931	\$4,360	\$1,578	\$40,156	
Energy Information Svcs	\$0	\$0	\$0	\$12,971	\$0	\$11,324	\$24,295	
Schools	\$73,380	\$0	\$151	\$110,211	\$441	\$23,360	\$207,543	
Total for Non-Residential	\$958,071	\$28,805	\$8,403	\$2,311,436	\$28,630	\$344,974	\$3,680,320	
Segment Totals	\$3,289,628	\$161,545	\$164,167	\$2,878,893	\$659,456	\$572,946	\$7,726,636	
							Program Costs	\$7,726,636
							Measurement, Evaluation, & Research (MER)	\$654,124
							Performance Incentive	\$2,249,258
							TOTAL	\$10,630,018

ARIZONA PUBLIC SERVICE COMPANY

**DSM SEMI-ANNUAL PROGRESS REPORT FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

**CERTIFICATION BY APS
OF
DSM SEMI-ANNUAL PROGRESS REPORT
FOR THE PERIOD:
JULY THROUGH DECEMBER 2006**

Pursuant to Decision No. 67744 (April 7, 2005), I certify that to the best of my knowledge and based on the information made available to me, the DSM Semi-Annual report is complete and accurate in all material respects.

FEB 27TH 2007

Date



Jan H. Bennett

Vice President of Customer Service