

NEW APPLICATION



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IN THE MATTER OF THE APPLICATION OF
ARIZONA PUBLIC SERVICE COMPANY FOR
APPROVAL OF APS HIGH-EFFICIENCY
CONSUMER PRODUCTS PROGRAM (A DEMAND
SIDE MANAGEMENT PROGRAM)

Docket No. E-01345A-05-_____

APPLICATION

E-01345A-05-0429

Arizona Public Service Company ("APS" or "Company") hereby submits this Application for Approval of its High-Efficiency Consumer Products Program ("Consumer Products Program")¹. The Consumer Products Program is another program in a series of Demand Side Management ("DSM") programs that APS will be proposing in the upcoming months to fulfill its DSM obligations pursuant to the Arizona Corporation Commission ("Commission") Decision No. 67744.²

Program Description

The Consumer Products Program promotes high-efficiency EPA/DOE ENERGY STAR[®] approved lighting and appliances. Qualified products include ENERGY STAR[®] clothes washers, refrigerators, freezers, dishwashers and compact fluorescent lights ("CFLs")³. The program is primarily aimed at APS residential customers who are looking to purchase or replace appliances or lighting. Small business customers may also benefit from the discount prices on qualifying energy efficient appliances and lighting.

¹ The proposed High-Efficiency Consumer Products Program is attached as Exhibit A.

² In Decision No. 67744, the Commission adopted a settlement agreement that obligates APS to spend a total of at least \$48 million on approved eligible DSM-related items during the calendar years 2005 - 2007.

³ Clothes dryers are not included in this program because there is no ENERGY STAR[®] rating for dryers.

1 The Consumer Products Program addresses two components, lighting and appliances.
2 The lighting component of the Program will solicit discount pricing from manufacturers and
3 provide for distribution of products through local retailers. This discount pricing will be passed
4 through to the customers from participating retailers. The retailers will include, but are not limited
5 to, home improvement, lighting, grocery and department stores. Increasing the purchase and use
6 of ENERGY STAR® appliances is the second component of the Consumer Products Program.
7 The benefits of purchasing ENERGY STAR® lighting and appliances will be communicated to
8 APS customers through various promotions, including vendor advertising and point-of-sale
9 displays. APS will provide overall program administration, marketing, quality control monitoring
10 and technical support. In addition, APS has issued a Request For Proposal for a contractor with
11 expertise in these types of promotional programs to implement the Consumer Products Program.

12 APS will make the program available to all APS residential and small business customers.
13 The Company will target retailers in zip codes located in APS' service territory. Due to the
14 proximity of other utility service territories, it is not possible to limit participation to APS
15 customers exclusively, which has been factored into the cost-effectiveness calculations.

16 **Estimated Costs, Energy Savings & Benefits of Program**

17 The program costs, including planning, implementation, customer incentives, education,
18 training, administration, and program awareness and marketing, for 2005 - 2007 are expected to
19 be \$5.525 million. The energy savings during that period is estimated to be 13,881 kW and
20 520,790,400 kWh over the lifetime of the products.

21 The DSM collaborative working group⁴ has participated in the development of and
22 provides supports for the proposed Consumer Products Program, and believes this program has
23 strong cost-effectiveness and the potential to reach a wide range of customers with both the
24 products and the energy efficiency message.

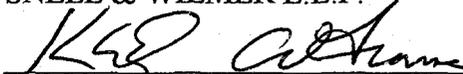
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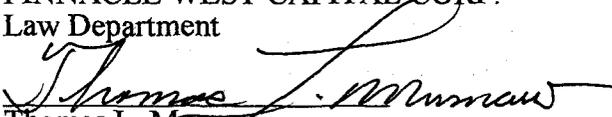
⁴ This collaborative group was formed as a result of Decision No. 67744.

1 Prompt Commission approval of the High-Efficiency Consumer Products Program will
2 help maximize the valuable benefits to residential and small business customers in APS' service
3 territory. In addition, prompt approval would enable the program to dove-tail with the ENERGY
4 STAR® national promotion this fall for "Change a Light, Change the World" campaign to
5 promote greater awareness and use of CFL's, as well as help ensure that APS can comply with
6 the 2005 DSM spending requirements ordered in Decision No. 67744.

7 For the reasons stated above, APS requests that the Commission expeditiously approve the
8 proposed High-Efficiency Consumer Products Program.

9 Respectfully submitted this 10th day of June, 2005.

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18 **ORIGINAL and 13 copies of the foregoing**
19 filed this 10th day of June 2005, with:

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21 Arizona Corporation Commission
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23 Phoenix, AZ 85007

24 
25
26

EXHIBIT A

High-Efficiency Consumer Products Program

Program Concept and Description

- This program promotes high-efficiency EPA/DOE Energy Star® approved lighting and appliances. Qualified products include Energy Star® clothes washers, refrigerators and freezers, dishwashers and Compact Fluorescent Lamps (CFL's). Clothes dryers are not included. There is currently no Energy Star® designation for dryers because there is very little difference in the energy usage of different models and brands of dryers.
- The program will solicit discount pricing from manufacturers (upstream buy-down) and distribution of CFL's through local retailers. Discount pricing from manufacturers will be established through a bid process. Customers will be referred to participating retailers (i.e. home improvement, lighting stores, and department stores) to purchase qualifying products. Discount pricing will be passed on to consumers through a negotiated agreement with lighting manufacturers and retailers.
- The program provides consumer education and promotion of Energy Star® rated lighting and appliances through APS promotions, vendor advertising and point-of-sale displays.
- Other delivery channels may be used as necessary to increase consumer awareness and promote qualifying products; including special promotional events and CFL giveaways.
- The program provides sales training for participating retailers to help them promote energy efficient products.

Target Market

- The primary target market is APS residential customers who are looking to purchase new/replacement appliances or lighting.
- This program will be implemented within the APS service territory where participating retailers can be located.
- As a secondary target, small business customers may also take advantage of discount prices on qualifying products subject.
- See Appendix 1 for more information about the target market and current baseline conditions.

Current Baseline Conditions

- According to EPA/DOE information, the following market penetrations represent the current baseline conditions for Energy Star® appliances in Arizona (based on 2005 information from Energy Star).
 - Refrigerators 40.82%
 - Clothes Washers 28.39%
 - Dishwashers 91.72%
- EPA reports that nationally approximately 35,435,000 Energy Star® approved CFL's were sold in 2003. No market specific data on CFL sales is currently available. However, there is some indication that the current market penetration for CFL's in Arizona is relatively low. In addition, some CFL's currently being stocked and sold in Arizona are not Energy Star® approved. Many of these lamps are inferior products with shorter life spans than Energy Star® approved CFL's. These assumptions about the current market will be confirmed by the DSM baseline and market potential study.

Program Eligibility

- The program is available to all APS residential customers. It is anticipated that some small business customers will also take advantage of lighting product discounts.
- The program will be targeted to reach APS customers; however, because of proximity to other utility service territories, it will not be possible to make this program completely exclusive to APS customers. When possible, APS will attempt to coordinate efforts with other local utilities and organizations. In addition, APS will employ program delivery strategies that limit participation by non-APS customers.
- The program will limit purchases of discounted lighting products to no more than 10 bulbs per customer.

Program Rationale

- The rationale for offering this program is that consumer appliances and lighting represent a significant portion of total APS energy consumption. For the typical household in the Phoenix metro area, the combination of lighting, refrigerators, clothes washers, and dishwashers represents as much as 15% of typical annual energy costs. When consumers are in the market to replace their lighting and appliances, a significant opportunity exists to help save energy for the lifetime of these appliances by encouraging consumers to purchase the most energy efficient products that are available.

High-Efficiency Consumer Products Program

- Program design that works directly with manufacturers and retailers to buy down the cost of energy efficient consumer products at the wholesale level has been highly successful in other utility programs and it increases program cost effectiveness as compared to other program delivery strategies.

Program Objectives

- Promote the purchase of high-efficiency appliances and compact fluorescent lamps.
- Increase the availability of Energy Star® rated products in the marketplace.
- Increase the awareness and knowledge of retailers and consumers on the benefits of Energy Star® rated appliances and lighting.

Products and Services Provided

- Discount pricing of qualified Energy Star® compact fluorescent lamps.
- Education and promotional efforts aimed at retailers and consumers about the benefits of Energy Star® rated appliances and lighting through educational brochures, program promotional material, point-of-sale displays, and website content.
- Customer referrals to participating retail stores.

Delivery Strategy and Administration

- This program will be implemented by a third party implementation contractor.
- The implementation contractor will be responsible for soliciting discount pricing from manufacturers, identifying and coordinating selected retail outlets, training retailer sales/management staff, tracking program progress, and reporting to APS
- APS will provide overall program administration, marketing, quality control monitoring, and technical support.
- Key partnering relationships include:
 - Manufacturers— negotiating discount pricing with manufacturers is a key component of the program
 - Appliance and Lighting Retailers – retail outlets display, promote and sell qualified products, and pass discount pricing on to consumer
 - Utilities and other organizations – where feasible, explore partnerships to coordinate efforts.
- APS will issue an RFP to lighting manufacturers to solicit their participation in this program. Manufacturers will work directly with their retailers to establish coordinated efforts. Only retail outlets that are in the APS service area will be eligible to participate.
- Appendix 2 provides a basic flow chart that outlines the anticipated program delivery.

Marketing and Communications

- APS provides program marketing and customer awareness including bill stuffers, consumer education pieces, website content, media ads, promotion of the Energy Star® label, etc.
- Implementation contractor assists with general marketing to customers in conjunction with APS marketing staff, coordinates point-of-sale marketing campaign through the select network of manufacturers and retail outlets, helps field customer inquiries, and promotes products and services.
- To limit the amount of participation from customers who are not served by APS, marketing for this program will target APS customers to the fullest extent possible. APS delivery channels including bill inserts, newsletters, APS website, and e-mail newsletters will be used to maximize exposure and awareness for APS customers.
- The proposed marketing plan for this program will consist of the elements shown in the following table:

High-Efficiency Consumer Products Program

Marketing Channel/Target Market	Marketing Initiative
APS Consumer Materials	<ul style="list-style-type: none"> • APS bill inserts, newsletter articles and/or bill messaging promoting special pricing events. Educational content about benefits. • APS website content about the benefits of purchasing high efficiency lighting and appliances and website features to promote special pricing events. • Feature articles in the Southwestern Home Journal special insert in the Arizona Republic delivered to Phoenix metro area homeowners within the APS service area.
Manufacturer/Retailer Advertising	<ul style="list-style-type: none"> • As part of buy-down program, leverage space in local retailer newspaper ads and other advertising media to promote special pricing for qualifying energy efficient products. Target to APS areas only when possible.
Point of Sale	<ul style="list-style-type: none"> • APS and implementation contractor work directly with manufacturers and retailers to feature special aisle end displays, signage, brochures and other point of sale displays to promote benefits of high efficiency appliances and advertise special pricing offers. • Implementation contractor conducts sales training for retail sales and management staff including sales tools that help sell the features and benefits of energy efficient products. • Special events and promotions to increase awareness and demand.
Public Relations	<ul style="list-style-type: none"> • Work with APS media relations team to secure free article placements.

High-Efficiency Consumer Products Program

Program Implementation Schedule

- The following table shows the estimated timeline for key program activities by quarter.

Program Activity	Timeline												
	2005			2006			2007						
Program submitted for approval													
Program approval (estimated)													
RFP process to select implementation vendor													
RFP issued to lighting manufacturers													
Final program development													
Marketing material creation													
Kick-off to target market/begin marketing activity													
Process evaluation													
Savings verification/Impact evaluation													
Program redesign as needed													

Monitoring and Evaluation Plan

- APS intends to use an independent third party evaluation contractor to conduct program evaluations.
- Prior to program implementation, APS will issue an RFP to retain an evaluation contractor. The evaluation contractor will then work directly with APS and the implementation contractor to ensure that program design and implementation activities will collect the necessary data for monitoring and evaluation.
- The strategy for monitoring and evaluation will involve integrated evaluation. In this approach, data are collected directly at the time of implementation rather than after the fact. The result is more timely and accurate data collection at a lower cost.
- For evaluation of the effectiveness of the CFL retail buy-down strategy, APS will work with retail partners to track store level sales data of qualifying vs. non-qualifying products. Sales during the promotional period will be compared to typical sales (prior month, prior year) to establish the incremental sales that result from the DSM program.
- In addition, APS will track the market transformation effect of the program by utilizing Energy Star® appliance sales penetration data and other sales tracking data to measure product penetration compared to pre-program baseline levels, including ongoing monitoring of the amount of shelf space devoted to Energy Star® approved lighting and appliances.

Program Costs

- Program costs for program years 2005, 2006, and 2007 including program planning and administration, program implementation, customer incentives, education and training, and program awareness and marketing, are as follows:
 - 2005: \$1.9 million
 - 2006: \$1.825 million
 - 2007: \$1.8 million
- See Appendix 3 for more information about program costs.

Estimated Energy Savings

- The table below shows estimated program energy savings. See Appendix 4 for more information.

Year	Annual Peak kW Demand Savings	Lifetime kWh Savings*
2005	4556	160,591,467
2006	4583	166,382,934
2007	4610	172,174,401
Program Total 2005-2007	13,881	499,148,801

* Lifetime kWh savings refers to total energy savings over the expected life of the DSM measure.

High-Efficiency Consumer Products Program

Program Cost Effectiveness

Total APS Program Cost 2005-2007	\$/Lifetime kWh	Societal Cost Test Total Benefits	Societal Cost Test Total Costs	Societal Cost Test Benefit/Cost Ratio
\$5,525,000	\$.011	\$23,121,222	\$8,977,672	2.58

In addition to the savings shown above, it is estimated that the program will produce these additional benefits:

Natural Gas Savings*	830,832 therms
Water Savings**	769,301,717 gallons
SOx	2146 lbs.
NOx	85,854 lbs.
CO2	457,719,633 lbs.
PM10	11,830 lbs.

* Natural gas savings result from hot water saved in homes with gas water heaters. Natural gas savings are provided consistent with the Cost Effectiveness section in staff's first draft of proposed DSM rules (Docket# RE-00000C-05-0230).

** Total water savings including both utility and customer water savings.

High-Efficiency Consumer Products Program

APPENDIX 1 –

Information about the target market and current baseline conditions

Market Size Estimates

Dishwashers

859,000 existing residential customers (687,000 low country, 172,000 high country) x product saturation (49% high country, 71% low country)¹ =

572,050 dishwashers in existing homes in the APS service area
(487,770 low country, 84,280 high country)²

572,050 dishwashers ÷ 12 year average product lifetime =
47,670 estimate of total annual replacement market³

Homes with electric water heating = 51%⁴
(weighted average saturation including high/low country)

Each 1% additional penetration (of total replacement market) =
477 dishwashers

Current baseline = 91.72% sales penetration⁵
End of 2005 – 93.72% penetration = 954 dishwasher upgrades
2006 – 95.72% penetration = 1908 dishwasher upgrades
2007 – 97.72% penetration = 2862 dishwasher upgrades
Total 2005-2007 = 5724 dishwasher upgrades

Homes with electric water heating =

2005 = 954 total upgrades x 51% = 487 dishwasher upgrades of homes with electric hot water
2006 = 1908 total upgrades x 51% = 973
2007 = 2862 total upgrades x 51% = 1460
Total 2005-2007 dishwasher upgrades with electric hot water savings = 2920

Homes with natural gas water heating =

2005 = 954 total upgrades x 49% = 467 dishwasher upgrades of homes with gas hot water
2006 = 1908 total upgrades x 49% = 935
2007 = 2862 total upgrades x 49% = 1402
Total 2005-2007 dishwasher upgrades with natural gas hot water savings = 2804

Clothes Washers

859,000 Existing residential customers (687,000 low country, 172,000 high country) x product saturation (83% low country, 78% high country)¹ =
704,370 total clothes washers in existing homes²

Total existing washers ÷ Average product lifetime (12 years) = estimate of total annual replacement market = 58,698³

Homes with electric water heating = 51%
(weighted average saturation including high/low country)⁴

Each 1% additional penetration (of total replacement market) = 587 clothes washers

High-Efficiency Consumer Products Program

Current baseline = 28.39% sales penetration⁵
End of 2005 – 30.39% penetration = 1174 clothes washer upgrades
2006 – 32.39% penetration = 2348 clothes washer upgrades
2007 – 34.39% penetration = 3522 clothes washer upgrades
Total 2005-2007 = 7044 clothes washer upgrades

Homes with electric water heating =

2005 = 1174 total upgrades x 51% = 599 washer upgrades in homes with electric hot water
2006 = 2348 total upgrades x 51% = 1197
2007 = 3522 total upgrades x 51% = 1797
Total 2005-2007 clothes washer upgrades with electric hot water savings = 3593

Homes with natural gas water heating =

2005 = 1174 total upgrades x 49% = 575 washer upgrades in homes with gas hot water
2006 = 2348 total upgrades x 49% = 1151
2007 = 3522 total upgrades x 49% = 1725
Total 2005-2007 clothes washer upgrades with natural gas hot water savings = 3451

Refrigerators

(859,000 existing residential customers) x (99% product saturation high and low country)¹ =
792,000 refrigerators in existing homes in the APS service area²

Total existing refrigerators (850,410) ÷ 18 year average product lifetime = estimate of total annual replacement market = 47,245³

Each 1% additional penetration = 472 refrigerators

Current baseline = 40.82% sales penetration⁵
2005 – 42.82% penetration = 944 refrigerator upgrades
2006 – 44.82% penetration = 1888 refrigerator upgrades
2007 – 46.82% penetration = 2832 refrigerator upgrades
Total 2005-2007 = 5664 refrigerator upgrades

Freezers

(859,000 existing residential customers) x (26% product saturation low country, 44% high country)¹ = 254,300 freezers in existing homes in the APS service area²

Total existing freezers (254,300) ÷ 18 year average product lifetime = estimate of total annual replacement market = 14,128³

Each 1% additional penetration = 141 freezers

Current baseline = 40.82% sales penetration⁵
2005 – 42.82% penetration = 282 freezer upgrades
2006 – 44.82% penetration = 564 freezer upgrades
2007 – 46.82% penetration = 846 freezer upgrades
Total 2005-2007 = 1692 freezer upgrades

High-Efficiency Consumer Products Program

Lighting

- 800,000 residential customers x 8 high use bulbs/household
= 6.4 million bulbs
- Subtract 30% adjustment factor
(estimate of non-market participants - i.e. existing CFL's, don't like CFL's, don't fit, etc.)
= 4.48 million bulbs
- Subtract 50% assuming that half of these high use bulbs are replaced each year
= 2.24 million bulbs/year = Total annual market potential³

Assumed market penetration each year =

2005

- assume program starts 3rd quarter = 1.12 million total market potential for 2nd half of 2005
- assume 50% penetration, limited time in market for 2005 = 500,000-700,000⁶ CFL's

2006 - 50% penetration = 1 million – 1.2 million CFL's

2007 - 50% penetration = 1 million – 1.2 million CFL's

¹ Appliance saturation information from APS 2001 Residential Appliance Saturation Study

² This analysis uses only existing residential customers because energy efficient appliances for new homes are being covered by the Residential New Construction program.

³ This is an estimate at this point which will be confirmed by the baseline and market potential study.

⁴ The vast majority of savings from Energy Star® dishwashers and clothes washers is a result of reduced hot water use, so this factor accounts for current saturation of electric water heating. For homes with gas water heating, savings are shown in terms of natural gas. Appliance saturation information is from the APS 2001 Residential Appliance Saturation Study.

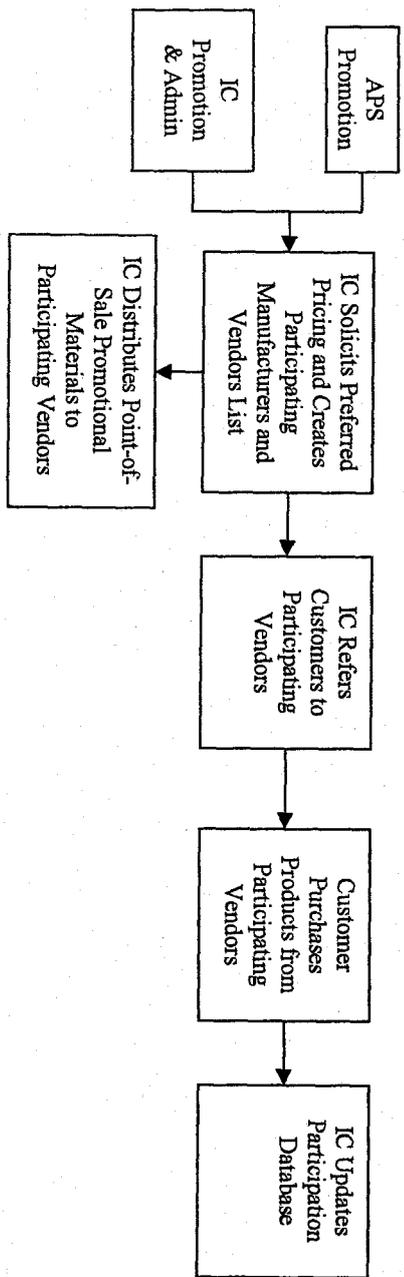
⁵ Energy Star® penetration estimate was provided by Energy Star® program administrators based on current Energy Star® sales penetration data for Arizona. Estimate of a 2% penetration increase per year of program implementation is from Energy Star® and is based on experience from program implementation in other markets.

⁶ The estimated potential of 500,000-700,000 CFL sales for fall 2005 has been confirmed through discussion with lighting manufacturers, Energy Star® representatives, and the DSM collaborative.

High-Efficiency Consumer Products Program

Appendix 2

High Efficiency Home Products Program Implementation Model



IC = Implementation Contractor

High-Efficiency Consumer Products Program

APPENDIX 3 – Program Costs

See accompanying Excel spreadsheet
for 2005-2007 program budgets

High-Efficiency Consumer Products Program

Appendix 4 – Energy Savings Calculations
**See accompanying Excel spreadsheet for
program energy saving calculations**

Appendix 3 - Consumer Products Program - Projected Program Costs 2005

Program Area	Program Activity	Plan & Admin	Program Implement	Incentives	Education & training	Program awareness	TOTAL	%										
Lighting	Retail buy-down program	40,000	100,000	1,000,000	20,000	70,000	\$1,230,000	64.7%										
	Retail point of sale	15,000			30,000		50,000	\$145,000	7.6%									
	Consumer education and awareness	20,000	30,000		35,000	25,000	\$110,000	5.8%										
	Special events, CFL giveaways	25,000	40,000	100,000	10,000	10,000	\$185,000	9.7%										
Appliances	Co-Op Advertising	20,000	30,000			50,000	\$100,000	5.3%										
	Retail point of sale	5,000	20,000		20,000	20,000	\$65,000	3.4%										
	Consumer education and awareness	5,000	20,000		20,000	20,000	\$65,000	3.4%										
	TOTAL	\$130,000	\$290,000	\$1,100,000	\$135,000	\$245,000	\$1,900,000											
	%	7%	15%	58%	7%	13%												
Lighting																		
Retail Buydown	APS will issue RFP to lighting manufacturers. Based on buydown of approximately 570,000 CFL bulbs for \$1.75 each.																	
Retail Point of Sale	Support for retail lighting program, includes working with retailers for point of sale education and displays and coordinating retailer participation in the retail buydown program.																	
Consumer Education and Awareness	Program marketing and educational efforts targeted to APS customers to promote the value of energy efficient lighting.																	
Special events, CFL giveaways	Special events in fall 2005 to coordinate with national EPA campaign. Program kick-off and demoreducation events to coordinate with retail buydown program. Incentive cost based on purchase of 30,000 bulbs for CFLs.																	
Co-Op Advertising	Will be included in the lighting buydown RFP. It will be available to lighting manufacturers and retailers who participate.																	
Appliances																		
Retail point of sale	Support for in-store promotion of qualifying Energy Star appliances, including retailer training and point of sale signage and consumer education pieces.																	
Consumer Education and Awareness	Program marketing and educational efforts targeted to APS customers to promote the value of energy efficient appliances.																	
Cost Allocation																		
Planning and Administration	Refers to APS costs to plan and administer programs. Includes management of program budgets, oversight of implementation contractor, program development, program coordination and general overhead expenses																	
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.																	
Customer Incentives	Includes all dollars that go toward customer incentives. For lighting measures, this includes the retail buydown expense for CFLs and cost of CFL giveaway bulbs. For appliances, the program design does not provide direct incentives to customers.																	
Education and Training	Includes all dollars that are used to support training for retail program partners. Also includes dollars that will be used for general consumer education about energy efficient lighting and appliances (i.e. provides some support for APS customer information tools such as the EnergyGuide on-line audit).																	
Program Awareness	Includes all expenses related to marketing the program and increasing consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).																	

Appendix 3 - Consumer Products Program - Projected Program Costs 2006

Program Area	Program Activity	Plan & Admin	Program Implement	Incentives	Education & training	Program awareness	TOTAL	%
Lighting	Retail buy-down program	40,000	80,000	1,000,000	20,000	75,000	\$1,215,000	66.6%
	Retail point of sale education	10,000	30,000		30,000	30,000	\$100,000	5.5%
	Consumer education	20,000	35,000		35,000	25,000	\$115,000	6.3%
	Special events, CFL giveaways	10,000	40,000	100,000	10,000	10,000	\$170,000	9.3%
	Co-Op Advertising	10,000	25,000			50,000	\$85,000	4.7%
Appliances	Retail point of sale education	5,000	20,000		25,000	25,000	\$75,000	4.1%
	Consumer education and awareness	5,000	20,000		20,000	20,000	\$65,000	3.6%
TOTAL		\$100,000	\$250,000	\$1,100,000	\$140,000	\$235,000	\$1,825,000	
%		5%	14%	60%	8%	13%		
Lighting								
Retail Buydown	APS will issue RFP to lighting manufacturers. Based on buydown of approximately 570,000 CFL bulbs for \$1.75 each.							
Retail Point of Sale	Support for retail lighting program, includes working with retailers for point of sale education and displays and coordinating retailer participation in the retail buydown program.							
Consumer Education and Awareness	Program marketing and educational efforts targeted to APS customers to promote the value of energy efficient lighting.							
Special events, CFL giveaways	Special events in fall 2006 to coordinate with national EPA campaign. Program kick-off and demo/education events to coordinate with retail buydown program. Incentive cost based on purchase of 30,000 bulbs for giveaways to increase awareness of CFL's.							
Co-Op Advertising	A co-op advertising budget will be included in the lighting buydown RFP. It will be available to lighting manufacturers and retailers who participate in the buydown program							
Appliances								
Retail point of sale	Support for in-store promotion of qualifying Energy Star appliances, including retailer training and point of sale signage and consumer education pieces.							
Consumer Education and Awareness	Program marketing and educational efforts targeted to APS customers to promote the value of energy efficient appliances.							
Cost Allocation								
Planning and Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination and general overhead expenses							
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.							
Customer Incentives	Includes all dollars that go toward customer incentives. For lighting measures, this includes the retail buydown expense for CFL's and cost of CFL giveaway bulbs. For appliances, the program design does not provide direct incentives to customers.							
Education and Training	Includes all dollars that are used to support training for retail program partners. Also includes dollars that will be used for general consumer education about energy efficient lighting and appliances (i.e. provides some support for APS customer information tools such as the EnergyGuide on-line audit).							
Program Awareness	Includes all expenses related to marketing the program and increasing consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).							

Appendix 3 - Consumer Products Program - Projected Program Costs 2007

Program Area	Program Activity	Plan & Admin	Program Implement	Incentives	Education & training	Program awareness	TOTAL	%
Lighting	Retail buy-down program	30,000	80,000	1,000,000	20,000	75,000	\$1,205,000	66.9%
	Retail point of sale education	10,000	50,000		25,000	25,000	\$110,000	6.1%
	Consumer education	20,000	35,000		35,000	25,000	\$115,000	6.4%
	Special events, CFL giveaways	10,000	35,000	100,000	10,000	10,000	\$165,000	9.2%
	Co-Op Advertising	10,000	25,000			50,000	\$85,000	4.7%
Appliances	Retail point of sale education	5,000	20,000		20,000	20,000	\$65,000	3.6%
	Consumer education and awareness	5,000	20,000		10,000	20,000	\$55,000	3.1%
TOTAL		\$90,000	\$265,000	\$1,100,000	\$120,000	\$225,000	\$1,800,000	
%		5%	15%	61%	7%	13%		
Lighting								
Retail Buydown	APS will issue RFP to lighting manufacturers. Based on buydown of approximately 570,000 CFL bulbs for \$1.75 each.							
Retail Point of Sale	Support for retail lighting program, includes working with retailers for point of sale education and displays and coordinating retailer participation in the retail buydown program.							
Consumer Education and Awareness	Program marketing and educational efforts targeted to APS customers to promote the value of energy efficient lighting.							
Special events, CFL giveaways	Special events in fall 2007 to coordinate with national EPA campaign. Program kick-off and demo/education events to coordinate with retail buydown program. Incentive cost based on purchase of 30,000 bulbs for giveaways to increase awareness of CFL's.							
Co-Op Advertising	A co-op advertising budget will be included in the lighting buydown RFP. It will be available to lighting manufacturers and retailers who participate in the buydown program							
Appliances								
Retail point of sale	Support for in-store promotion of qualifying Energy Star appliances, including retailer training and point of sale signage and consumer education pieces.							
Consumer Education and Awareness	Program marketing and educational efforts targeted to APS customers to promote the value of energy efficient appliances.							
Cost Allocation								
Planning and Administration	Refers to APS costs to plan and administer programs - includes management of program budgets, oversight of implementation contractor, program development, program coordination and general overhead expenses							
Program Implementation	Refers to program delivery costs associated with implementing the program. Includes implementation contractor labor and overhead costs as well as other direct program delivery costs.							
Customer Incentives	Includes all dollars that go toward customer incentives. For lighting measures, this includes the retail buydown expense for CFL's and cost of CFL giveaway bulbs. For appliances, the program design does not provide direct incentives to customers.							
Education and Training	Includes all dollars that are used to support training for retail program partners. Also includes dollars that will be used for general consumer education about energy efficient lighting and appliances (i.e. provides some support for APS customer information tools such as the EnergyGuide on-line audit).							
Program Awareness	Includes all expenses related to marketing the program and increasing consumer awareness (this refers to direct program marketing costs as opposed to general consumer education).							

Appendix 4 - Consumer Products Program - Energy Savings Calculations

Measure	Demand kW	Peak Coincidence Factor	Annual Energy savings per unit kWh	# unit 2005	# unit 2006	Adjust ment Factor	TOTAL							Total Program Cost \$/Lifetime 2005-2007 kWh	Total Units 2005-2007											
							TOTAL KW	TOTAL Savings 05-07 life	Meas. Life 05	TOTAL Lifetime kWh 06	TOTAL Lifetime kWh 07	TOTAL Lifetime kWh 07	TOTAL Lifetime kWh 05-07													
Washer	0.183	0.18	464	599	1197	1.00	20.8	41.6	62.4	12.1	12	3,335,232	6,684,896	10,005,696	20,005,824	3593										
Dishwasher	0.023	0.18	72	487	973	1.00	2.0	4.0	6.0	12.1	12	420,768	840,672	1,261,440	2,522,880	2920										
Refrigerator	0.01	0.35	96	944	1898	1.00	3.3	6.6	9.9	19.8	18	1,631,232	3,262,464	4,893,696	9,787,392	5664										
Freezer	0.01	0.35	80	282	564	1.00	1.0	2.0	3.0	5.9	18	406,080	812,160	1,218,240	2,436,480											
CFL Lighting	0.074	0.17	86	600,000	600,000	0.80	4528.80	4528.8	4528.8	13586.4	5	154,800,000	154,800,000	154,800,000	484,400,000	1,800,000										
APPLIANCES ONLY													2,030	4,058	6,089											
TOTAL ALL MEASURES													602,312	604,622	606,935	4,555.9	4,583.0	4,610.1	13,749.1	160,583,312	166,380,192	172,179,072	499,152,576	\$5,525,000	\$0.011	

Where:

- Column A = DSM measure
- Column B = kW savings - from DEER database and EPA/DOE information
- Column C = Peak coincidence - APS and Summit Blue Consulting analysis
- Column D = kWh savings/unit = from DEER database and EPA/DOE Energy Star information
- Column E-G = APS estimates of # units each year (see program pre-approval document appendix 1 for more information. For dishwashers and clothes washers, this only includes homes with electric water heating (because the vast majority of savings are due to reduced hot water use). Therm savings from homes with gas water heating are shown in the additional benefits chart in the cost effectiveness section of the program description. All estimates will be updated by the APS market potential study.
- Cells F88G8 Note that the number of 600,000 annual CFL units for 2006-7 is based on the current annual budgeted amount of \$1.1 million in incentives for the buydown program. It is estimated that the market potential for each year is greater than 600,000 CFL's.
- Column H = Adjustment Factor = For CFL's, total savings are adjusted to account for 40% leakage of CFL bulbs into other utility service areas. For appliances, no adjustment is needed.
- Column I-L = Total kW demand savings estimate
- Column M = Measure life - based on DEER database and EPA/DOE Energy Star information
- Column N-Q = Estimated lifetime kWh energy savings over the expected life of the measures.