

NEW APPLICATION
ORIGINAL
UniSourceEnergy
SERVICES



0000086630

Arizona Corporation Commission
DOCKETED

JUL -3 2008

July 3, 2008

DOCKETED BY	KK . NR
-------------	---------

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

E-04204A-08-0341

Re: UNS Electric, Inc.'s Compact Fluorescent Lamp Buydown Program
E-04204A-08-_____

Docket Control:

Enclosed please find an original and 13 copies of UNS Electric, Inc.'s ("UNS Electric") proposed Compact Fluorescent Lamp Buydown Program 2008-2012.

If you have any questions about these filing, please contact me at (520) 884-3664.

Sincerely,

Michelle Livengood
Michelle Livengood

Enclosures

cc: Chairman Gleason
Commissioner Mundell
Commissioner Hatch-Miller
Commissioner Mayes
Commissioner Pierce
Ernest Johnson, Esq., Director, Utilities Division
Janice Alward, Esq., Chief Counsel
Lyn Farmer, Esq., Chief Administrative Law Judge
Ms. Barbara Keene, Utilities Division
Mr. Jerry Anderson, Utilities Division
Ms. Julie McNeely-Kirwan, Utilities Division
Daniel W. Pozefsky, Residential Utility Consumer Office
Marshall Magruder

RECEIVED
2008 JUL -3 P 3:31
AZ CORP COMMISSION
DOCKET CONTROL

Compact Fluorescent Buydown Program

UNS Electric, Inc.
Compact Fluorescent Lamp Buydown Program

Compact Fluorescent Buydown Program

Table of Contents

Program Concept and Description 1
Target Market..... 1
Current Baseline Conditions 1
Program Eligibility..... 1
Program Rationale 2
Program Objectives..... 2
Products and Services Provided..... 2
Delivery Strategy and Administration 2
Marketing and Communications..... 3
Program Implementation Schedule..... 4
Measurement, Evaluation and Research Plan..... 4
Program Budget 5
Estimated Energy Savings 5
Program Cost Effectiveness 6
Appendix 1 – CFL Buydown Program Implementation Process..... 8
Appendix 2 – Measure Level Energy Savings and Benefit Cost Calculations..... 9

Compact Fluorescent Buydown Program

UNS Electric Compact Fluorescent Lamp Buydown Program

Program Concept and Description

This program promotes energy efficient Energy Star approved lighting products. Qualified products include compact fluorescent lamps ("CFL") in a wide range of sizes and configurations. The program is an up-stream intervention program, and it will operate by soliciting discount pricing from manufacturers and distributing qualifying products through retailers in UNS Electric, Inc.'s ("UNS Electric" or the "Company") service region. Discount pricing from manufacturers will be established through a bid process. Customers will be referred to participating retailers to purchase products. Participating retailers are expected to include home improvement centers, lighting equipment stores, department stores, and supermarkets. Discount pricing will be passed on to consumers through a negotiated agreement with lighting manufacturers and retailers.

UNS Electric will provide consumer education on the benefits of qualifying equipment and will promote the program through UNS Electric promotional events, the UniSource Energy Services website, vendor advertising and point-of-sale displays. The program will also provide training to participating retailers on the benefits of qualifying products, promotional activities by UNS Electric, and how to promote the products in store.

Target Market

The target market for this program is residential and small business customers in UNS Electric's service region.

Current Baseline Conditions

UNS Electric recognizes that the market for CFLs has matured within the last few years. More lamp sizes and configurations are available, and light quality, performance and durability have improved significantly. Pricing has now come down to a level that is more competitive with conventional incandescent lighting. Still, barriers remain to the widespread purchase of CFLs as the standard lamp choice. While UNS Electric has not conducted a formal baseline study and does not have firm data on the current market penetration of CFLs, it is the Company's perception that they still represent a relatively small fraction of the overall screw-in lamp market. This program is intended to stimulate widespread acceptance of CFLs as the lamp of choice for both replace-on-burnout situations, as well as a means of reducing consumer energy costs.

Program Eligibility

The program is available to all UNS Electric customers. It is expected that the bulk of purchases will be made primarily by residential customers and, secondarily, by small business customers. While the program is targeted at UNS Electric customers, it's expected that there will be some spillover to customers of other neighboring utilities. UNS Electric will employ marketing and delivery strategies that

Compact Fluorescent Buydown Program

will be designed to limit participation by non-UNS Electric customers. The program will establish limits on the purchases of discounted products for residential and commercial customers to avoid any excessive or suspect rebate activity.

Program Rationale

Improving the efficiency of home and small business lighting is an action that UNS Electric customers can understand and take on their own without the need for complex or detailed savings and cost analysis. The only market barriers preventing widespread adoption include the higher cost of lamps compared to incandescent lamps, lingering performance uncertainties, and lack of awareness about the savings and benefits. The up-stream buydown program design provides price discounts at the point of purchase and eliminates the “hassle factor” that could be associated with alternative program designs such as a rebate program. Experience has shown that an up-stream buydown program design for this technology has been highly effective elsewhere in the state and around the country and is an efficient and highly cost-effective way to promote energy efficient lighting.

Program Objectives

The objectives of the program are to:

- Reduce peak demand and overall energy consumption in homes and small business facilities in UNS Electric’s service territory;
 - Incentivize UNS Electric customers to purchase CFLs;
 - Increase the availability of energy efficient lighting products in the marketplace, specifically in UNS Electric’s service territory; and
 - Increase the awareness and knowledge of retailers and UNS Electric customers on the benefits of energy efficient lighting products.
-

Products and Services Provided

The products and services provided by the program include:

- Discount pricing of qualified CFLs including screw-in spiral CFL replacements for standard base incandescent lamps, spot and flood CFLs, and dimming CFLs;
 - Education and promotional efforts designed to inform consumers and retailers about the benefits of energy efficient lighting products, including educational brochures, program promotional material, UNS Electric website content, and point-of-sale displays with promotional materials; and
 - Customer referrals to participating retail outlets.
-

Delivery Strategy and Administration

The strategy to be employed for program delivery and administration is as follows:

- The program will be implemented by a third party implementation contractor.
- UNS Electric will solicit participation of lighting manufacturers in the program through an RFP process. Manufacturers will work directly with their retailers to coordinate program delivery.
- Implementation contractor responsibilities will include:
 - Soliciting of discount pricing from manufacturers in conjunction with UNS Electric;
 - Identifying and coordinating with selected retail outlets;

Compact Fluorescent Buydown Program

- Training retail outlet sales and management staff; and
- Tracking program progress and reporting to UNS Electric.
- UNS Electric will provide overall program management, quality control, and evaluation.
- Key partnering relationships include:
 - The implementation contractor;
 - Lighting manufacturers;
 - Lighting retailers; and
 - Local organizations that can help promote the program.

Program implementation flow chart is included in Appendix 1.

Marketing and Communications

The marketing and communications strategy will include the following components:

- UNS Electric will provide program marketing and customer awareness building through a range of strategies including:
 - Promotions on the UNS Electric website about the benefits of purchasing energy efficient lighting products and announcement of special pricing and promotional events;
 - Working with the implementation contractors to develop and coordinate point-of-sale advertising at participating retail outlets;
 - Providing information through UNS Electric's customer care center; and
 - General ongoing promotion of the Energy Star label and the value of Energy Star lighting and appliances.
- The implementation contractor will provide general program marketing in conjunction with UNS Electric marketing efforts including:
 - Development of point-of-sale marketing pieces and coordination of point-of-sale marketing displays with participating retailers including aisle end cap displays, signage, brochures and other point-of-sale collateral pieces to promote the benefits of qualifying products and announce special pricing and promotional events;
 - Scheduling and coordination of special pricing and promotional events with participating retailers;
 - Assistance with responding to customer inquiries about the program and where to purchase qualifying products;
 - Training participating retailers on communicating the availability and benefits of qualifying products to their customers; and
 - Advertising in major newspapers and other selected print media in the UNS Electric service region to raise awareness of the availability of the program and attract customers to retail outlets.
- The advertising campaign will communicate that energy efficient lighting products will help reduce customer energy bills, provide equal or better lighting output and quality, last up to 10 times longer requiring fewer replacements, and are beneficial for the environment.

Compact Fluorescent Buydown Program

Program Implementation Schedule

Because UNS Electric will utilize the same Implementation Contractor already selected to implement the Tucson Electric Power Company CFL Buydown program, the schedule for implementation following program approval will be reduced.

Table 1 shows the estimated timeline for key program activities by quarter.

Table 1. Implementation Schedule

Program Activities	2008			2009			2010		
Submit program for approval									
Program approval (estimated)									
Prepare and submit RFP									
Selection of implementation contractors									
Selection of lighting manufacturers									
Create marketing materials and campaign									
Program kick-off and implementation									
Special promotional and pricing campaigns									
Process evaluation									
Measure verification and impact evaluation									
Redesign design program as needed									

Measurement, Evaluation and Research Plan

UNS Electric will adopt a strategy that calls for integrated data collection that is designed to provide a quality data resource for program tracking, management and evaluation. This approach will entail the following primary activities:

- **Database management** - As part of program operation, UNS Electric or an approved contractor will collect the necessary data elements to populate the tracking database and provide periodic reporting.
- **Integrated implementation data collection** – UNS Electric will work with the implementation contractor to establish systems to collect the data needed to support effective program management and evaluation through the implementation and customer application processes. The database tracking system will be integrated with implementation data collection processes.
- **Tracking of savings using deemed savings values** – UNS Electric will develop deemed savings values for each measure and technology promoted by the program and periodically review and revise the savings values to be consistent with program participation and accurately estimate the savings being achieved by the program.

This approach will provide UNS Electric with ongoing feedback on program progress and enable management to adjust or correct the program measures to be more effective, provide a higher level of service, and be more cost effective. Integrated data collection will provide a high quality data resource for evaluation activities.

Compact Fluorescent Buydown Program

Program Budget

The first year annual budget of approximately \$225,000 will be allocated as shown in Table 2, while Table 3 provides the expected program budgets through 2012 which includes an escalation rate of 3% per year.

Table 2. 2008 Program Budget

Total Program Budget	\$225,000
Administrative Cost Allocation	
Managerial & Clerical	\$5,608
Travel & Direct Expenses	\$294
Overhead	\$12,098
Total Administrative Cost	\$18,000
Marketing Allocation	
Internal Marketing Expense	\$19,125
Subcontracted Marketing Expense	\$19,125
Total Marketing Cost	\$38,250
Direct Implementation	
Financial Incentives to Upstream Participants	\$124,605
Support Activity Labor	0
Hardware & Materials	\$1,598
Rebate Processing & Inspection	\$33,548
Total Direct Installation Cost	\$159,750
Evaluation, Monitoring & Verification Cost Allocation	
EM&V Activity	\$5,041
EM&V Overhead	\$3,959
Total EM&V Cost	\$9,000

Table 3. 2008 – 2012 Program Budget

Year	2008	2009	2010	2011	2012
Total budget	\$225,000	\$231,750	\$238,703	\$245,864	\$253,239
Incentives	\$124,605	\$128,343	\$132,193	\$136,159	\$140,244
Administrative Costs	\$100,395	\$103,407	\$106,509	\$109,704	\$112,995
Incentives as % of budget	55.4%	55.4%	55.4%	55.4%	55.4%

Estimated Energy Savings

The program offers manufacturer incentives on a range of integral CFL lamps, from 13 to 55 watts. Table 4 provides the assumed base lamp wattage, and corresponding CFL wattages as recommended by manufacturers. This table also provides the expected demand and energy savings, based on an anticipated 854 hours of annual usage.

Table 4. Projected Lamp Sales and Capacity and Energy Benefits

DEMAND/ENERGY SAVINGS

Compact Fluorescent Buydown Program

Fixture Type	Inc. Fixture Watt Range	Inc. Fixture Watts*	CFL Fixture Watt Range	CFL Fixture Lumen Range	CFL Fixture Watts*	Non-Coincident Demand Savings (KW)	On-peak Energy Savings (KWh)	Off-peak Energy Savings (KWh)
ES Integral CFL	40	40	13-19	450 to 799	16	0.024	4	17
	60	60	20-24	800 to 1099	22	0.038	6	27
	75	75	25-30	1100 to 2599	27	0.048	7	33
	100	100	32-55	2600 or Greater	43	0.057	9	40

Table 5 shows estimated energy savings from this program for program years 2008 through 2012, while Table 6 shows the projected five-year environmental benefits. See Appendix 2 for more information about estimated energy savings for each measure, and the weighted average savings based on projected lamp market participation.

Table 5. Projected Lamp Sales and Capacity and Energy Benefits

Year	2008	2009	2010	2011	2012
Projected Lamp Sales	80,390	82,802	85,286	87,845	90,480
Non-coincident peak (kW)	3,019	3,109	3,202	3,299	3,398
Coincident peak (kW)	302	311	320	330	340
Energy Savings (kWh)	2,578,235	2,655,582	2,735,249	2,817,307	2,901,826

Table 6. Projected Environmental Benefits, 2008 - 2012

SOx	10,677	Lbs
NOx	34,494	Lbs
CO2	22,257,009	Lbs

Program Cost Effectiveness

The cost effectiveness of each measure and each program as a whole was assessed using the Total Resource Cost ("TRC") test, the Societal Cost ("SC") test and the Ratepayer Impact Measure ("RIM") test. Measure analysis worksheets showing all energy savings, cost and cost-effectiveness calculations are included in Appendix 2.

The cost effectiveness analysis requires estimation of:

- net demand and energy savings attributable to the program;
- net incremental cost to the customer of purchasing qualifying products;
- UNS Electric's program administration costs;
- the present value of program benefits including UNS Electric avoided costs over the life of the measures; and
- UNS Electric lost revenues.

In addition to estimating the savings from each measure, this analysis relies on a range of other assumptions and financial data. Table 7 summarizes data used in the cost effectiveness analysis and the data sources.

Compact Fluorescent Buydown Program

Table 7. Cost-Effectiveness Analysis Assumptions

Conservation Life (yrs):	7.3
Program Life (yrs):	5
Demand AC (\$/kW):	\$56.66
Summer Energy AC (\$/kWh):	\$0.07100
Winter Energy AC (\$/kWh):	\$0.07100
Ratio of Non-inc to Incentive Costs	80.6%
IRP Discount Rate:	8.50%
Social Discount Rate	5.00%
NTG Ratio:	60%

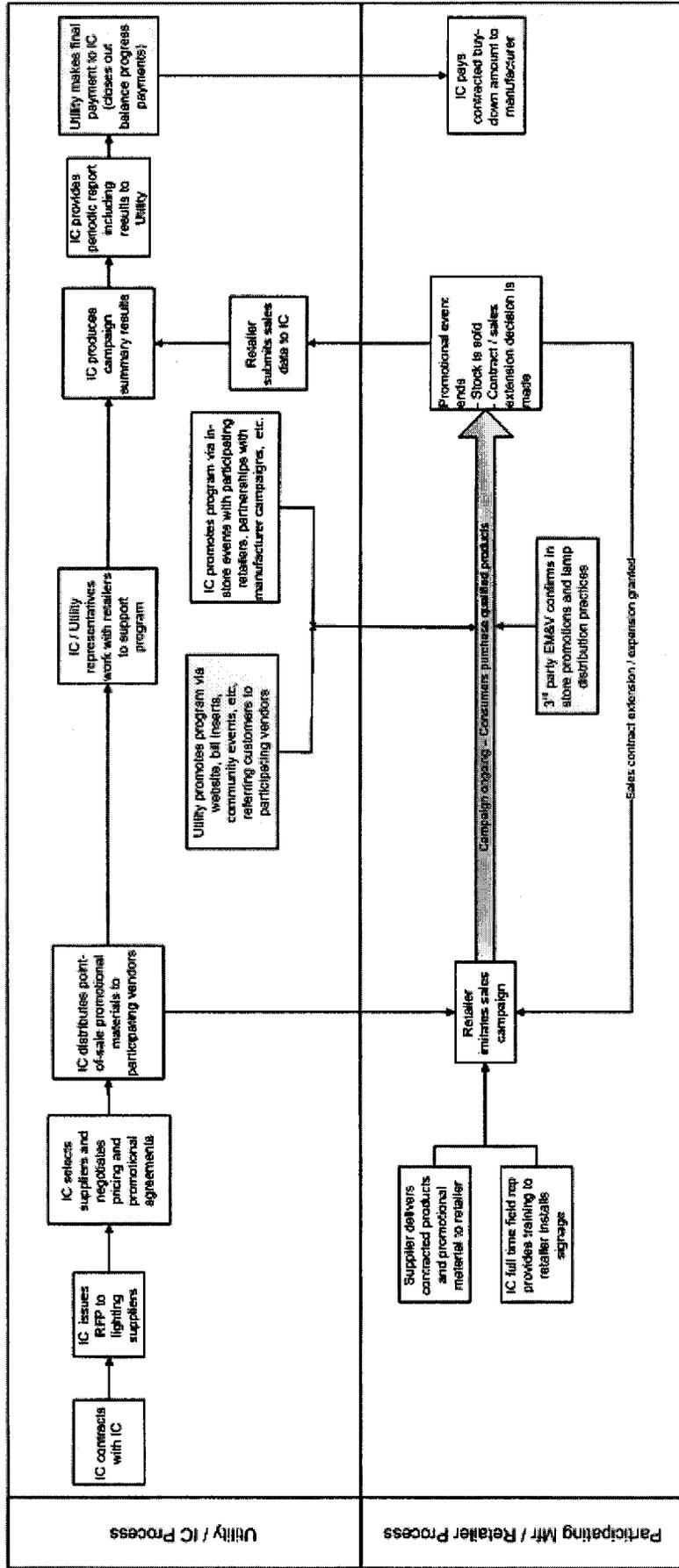
Table 8 provides a summary of the benefit/cost analysis results for this program. A detailed benefit/cost analysis is presented in Appendix 2.

Table 8. Benefit/Cost Analysis Results Summary

Cost Effectiveness Tests	TRC	SC	RIM
Benefit/Cost Ratio	1.92	2.18	0.40

Compact Fluorescent Buydown Program

Appendix 1 – CFL Buydown Program Implementation Process



Compact Fluorescent Buydown Program

Appendix 2 – Measure Level Energy Savings and Benefit Cost Calculations

DEMAND/ENERGY SAVINGS				INCENTIVE CALCULATIONS									
Fixture Type	Inc. Fixture Watt Range	CFL Fixture Watt Range	CFL Fixture Lumen Range	Non-Coincident Demand Savings (KW)	On-pk Energy Savings (KWh)	Off-pk Energy Savings (KWh)	IRP PV Benefit (\$)	Social PV Benefit (\$)	Recommended Incentive (\$)	PV Program Cost (\$)	NPV (\$)	PV	
												% PV	% PV
ES Integral CFL	40	13-19	450 to 799	16	4	17	6	6	1.00	3	2	18%	18%
	60	20-24	800 to 1099	22	6	27	9	10	1.50	4	4	17%	17%
	75	25-30	1100 to 2599	27.5	7	33	11	13	2.00	5	6	18%	18%
	100	32-55	2600 or Greater	43.5	9	40	13	15	2.50	6	7	19%	19%
Weighted Average							8.73	9.90	1.55	4.54	4.18	18%	18%

DEMAND/ENERGY SAVINGS				CUSTOMER COST/SAVINGS				WGT.			B/C	
Fixture Type	Inc. Fixture Watt Range	CFL Fixture Watt Range	Incr. Cost (\$)	Cost Savings (\$)	Payback wo/Incr. (yrs)	w/Incr. (yrs)	Weighting Factor (%)	TRC	Societal			
									% Incent	B/C		
ES Integral Cf	40	13-19	4.45	2	2.15	1.67	30%	1.61	22%	1.82		
	60	20-24	5.34	3	1.63	1.18	40%	2.00	28%	2.27		
	75	25-30	6.48	4	1.58	1.10	20%	2.01	31%	2.28		
	100	32-55	7.24	5	1.49	0.97	10%	2.06	35%	2.34		
Weighted Average							100%	1.92	28%	2.18		

Incremental costs

Compact Fluorescent Buydown Program

Wattage range	Average Incremental Cost (retail)
13-19	\$4.45
20-24	\$5.34
25-30	\$6.48
32-55	\$7.24

2005 DEER costs and price survey adjustments

Measure ID	Category	Measure Name	Measure Description	Base Description	Incremental Equipment Cost	Cost Unit
D03-801	LTG	7-13 Watt Integral CFL	7-13 Watt < 800 Lumens - screw-in	40W Incandescent	\$4.13	Lamp
D03-801	LTG	7-13 Watt Integral CFL	7-13 Watt < 800 Lumens - screw-in	40W Incandescent	\$3.37	Lamp
D03-802	LTG	13 Watt Integral CFL	13 Watt ≥800 Lumens - screw-in	60W Incandescent	\$4.00	Lamp
D03-802	LTG	13 Watt Integral CFL	13 Watt ≥800 Lumens - screw-in	60W Incandescent	\$3.25	Lamp
D03-803	LTG	14 Watt Integral CFL	14 Watt - screw-in	60W Incandescent	\$4.35	Lamp
D03-803	LTG	14 Watt Integral CFL	14 Watt - screw-in	60W Incandescent	\$3.55	Lamp
D03-804	LTG	15 Watt Integral CFL	15 Watt - screw-in	60W Incandescent	\$4.70	Lamp
D03-804	LTG	15 Watt Integral CFL	15 Watt - screw-in	60W Incandescent	\$3.84	Lamp
D03-805	LTG	16 Watt Integral CFL	16 Watt - screw-in	60W Incandescent	\$5.05	Lamp
D03-805	LTG	16 Watt Integral CFL	16 Watt - screw-in	60W Incandescent	\$4.14	Lamp
D03-806	LTG	18 Watt Integral CFL	18 Watt < 1,100 Lumens - screw-in	60W Incandescent	\$5.75	Lamp
D03-806	LTG	18 Watt Integral CFL	18 Watt < 1,100 Lumens - screw-in	60W Incandescent	\$4.72	Lamp
D03-807	LTG	18 Watt Integral CFL	18 Watt ≥1,100 Lumens - screw-in	75W Incandescent	\$5.40	Lamp
D03-807	LTG	18 Watt Integral CFL	18 Watt ≥1,100 Lumens - screw-in	75W Incandescent	\$4.43	Lamp
D03-808	LTG	19 Watt Integral CFL	19 Watt ≥1,100 Lumens - screw-in	75W Incandescent	\$5.73	Lamp
D03-808	LTG	19 Watt Integral CFL	19 Watt ≥1,100 Lumens - screw-in	75W Incandescent	\$4.71	Lamp
D03-809	LTG	20 Watt Integral CFL	20 Watt - screw-in	75W Incandescent	\$6.07	Lamp
D03-809	LTG	20 Watt Integral CFL	20 Watt - screw-in	75W Incandescent	\$4.99	Lamp

Compact Fluorescent Buydown Program

D03-810	LTG	23 Watt Integral CFL	23 Watt - screw-in	100W Incandescent	\$5.67	Lamp
D03-810	LTG	23 Watt Integral CFL	23 Watt - screw-in	100W Incandescent	\$4.66	Lamp
D03-811	LTG	25 Watt Integral CFL	25 Watt <1,600 Lumens - screw-in	75W Incandescent	\$7.73	Lamp
D03-811	LTG	25 Watt Integral CFL	25 Watt <1,600 Lumens - screw-in	75W Incandescent	\$6.38	Lamp
D03-812	LTG	25 Watt Integral CFL	25 Watt ≥1,600 Lumens - screw-in	100W Incandescent	\$6.21	Lamp
D03-812	LTG	25 Watt Integral CFL	25 Watt ≥1,600 Lumens - screw-in	100W Incandescent	\$5.11	Lamp
D03-813	LTG	26 Watt Integral CFL	26 Watt <1,600 Lumens - screw-in	75W Incandescent	\$8.06	Lamp
D03-813	LTG	26 Watt Integral CFL	26 Watt <1,600 Lumens - screw-in	75W Incandescent	\$6.66	Lamp
D03-814	LTG	26 Watt Integral CFL	26 Watt ≥1,600 Lumens - screw-in	100W Incandescent	\$6.48	Lamp
D03-814	LTG	26 Watt Integral CFL	26 Watt ≥1,600 Lumens - screw-in	100W Incandescent	\$5.34	Lamp
D03-815	LTG	28 Watt Integral CFL	28 Watt - screw-in	100W Incandescent	\$7.02	Lamp
D03-815	LTG	28 Watt Integral CFL	28 Watt - screw-in	100W Incandescent	\$5.79	Lamp
D03-816	LTG	32 Watt Integral CFL	32 Watt - screw-in	100W Incandescent	\$8.11	Lamp
D03-816	LTG	32 Watt Integral CFL	32 Watt - screw-in	100W Incandescent	\$6.70	Lamp
D03-817	LTG	36 Watt Integral CFL	36 Watt - screw-in	150W Incandescent	\$6.54	Lamp
D03-817	LTG	36 Watt Integral CFL	36 Watt - screw-in	150W Incandescent	\$5.14	Lamp
D03-818	LTG	50 Watt Integral CFL	50 Watt - screw-in	150W Incandescent	\$9.89	Lamp
D03-818	LTG	50 Watt Integral CFL	50 Watt - screw-in	150W Incandescent	\$7.94	Lamp

Effective useful life

Average sample rated life (hours)	8,308
Rated life degradation factor	25%
Adjusted rated life	6,231
Annual op hours	854
Effective useful life (years)	7.30

Measure level spreadsheet for program benefit/cost calculations available electronically upon request.