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MEMORANDUM

Arizona Corporation Commission

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AZ CORP COMMISSION
DOCKET CONTROL

TO: THE COMMISSION

JAN 3 2012

FROM: Utilities Division

DOCKETED BY

DATE: January 3, 2012

RE: UNS ELECTRIC, INC. -- APPLICATION FOR APPROVAL OF ITS 2011-2012
ENERGY EFFICIENCY IMPLEMENTATION PLAN
(DOCKET NO. E-04204A-11-0056)

Implementation Filing

On January 31, 2011, UNSE ("UNSE" or "the Company") filed its application for approval of the Company's Energy Efficiency Implementation Plan for 2011-2012 ("Implementation Plan"). On September 1, 2011, the Company filed updated information concerning several elements of the original filing, including the Residential Financing Program, the budgets, Implementation Plan savings, and the Demand-side Management ("DSM") Adjustor.

The Implementation Plan and updated filing address the following issues and Company proposals:

- i. *UNSE Portfolio of Programs for 2011-2012.* The existing and proposed DSM programs and measures proposed for the Company's DSM through the 2012 program year;
- ii. *DSM Performance Incentive.* UNSE does not currently have a performance incentive. The Company is proposing a performance incentive of \$2.23 million for two years, on a pre-tax basis, similar to the modified performance incentive proposed for TEP in its Implementation Plan; and
- iii. *Proposed Demand-Side Management ("DSM") Surcharge ("DSMS").* The proposed DSMS is the rate, per kWh, at which the Company would recover its proposed DSM costs and DSM Performance Incentive.

Scope and Structure of Program Review

Existing and Proposed Programs. The UNSE Implementation Plan is organized into four parts: (i) Residential; (ii) Commercial; (iii) Behavioral; and (iv) Support. For purposes of review, each sector has been addressed in the above order: New (Proposed), Existing (with modifications proposed) programs, and Existing (without modifications proposed). The programs have been reviewed in the order indicated by Program Description Tables 1-4, herein.

Summarized descriptions are provided for existing programs. The focus of Staff's review and analysis was new programs, proposed changes to existing programs and new Implementation Plan components or enhancements, and the methodology for calculating the DSMS. Measures previously determined by Staff to be cost-effective were re-evaluated for cost-effectiveness if current information indicated that re-evaluation was necessary. Information from the August 2011 update has been incorporated into this review.

UNSE Implementation Plan. The tables below list programs by sector, and indicate whether each program is new (proposed) or existing (with or without proposed modifications). A brief description is also provided. More detailed program descriptions are presented herein, in the order indicated in the following tables.

PROGRAM DESCRIPTION – TABLE 1 (Residential)

RESIDENTIAL SECTOR		
Program Name	New (Proposed), Existing with modifications proposed or Existing without modifications proposed	Description
Appliance Recycling	New (Proposed)	Removes and recycles inefficient refrigerators and freezers.
Multi-Family	New (Proposed)	Promotes direct install of energy efficient measures at apartment complexes consisting of more than four apartments.
Efficient Products (formerly the CFL Buy-Down Program)	Existing, with additional measures proposed	Program currently promotes CFLs. The Company has proposed including advanced power strips, and energy efficient pool pumps and timers.
Low Income Weatherization	Existing, with expanded eligibility proposed (eligibility to track with that of federal LIHEAP Program)	Assists in making low-income homes more energy efficient.
Residential New Construction	Existing, no modifications proposed	Promotes the building of more efficient new homes.
Existing Homes and Audit Direct Install (formerly the Residential HVAC Program)	Existing, no modifications proposed	Promotes energy efficiency in existing homes.
Shade Tree	Existing, no modifications proposed	Promotes planting of desert-adapted shade trees in locations designed to enhance energy efficiency.

PROGRAM DESCRIPTION – TABLE 2 (Commercial)

COMMERCIAL SECTOR		
Program Name	New (Proposed) or Existing	Description
Bid for Efficiency – Pilot	New (Proposed)	Customers or project sponsors develop a holistic EE project then bid competitively for incentives within broad program guidelines.
Retro-Commissioning	New (Proposed)	Involves using a systematic approach to identifying building equipment or processes that are not achieving optimal performance or results in an existing facility.
Schools Facilities	New (Proposed)	A program similar to the UNSE C&I Facilities Program, but with a separate budget specifically for school facilities.
C&I Demand Response	New (Proposed)	A third-party implementation contractor negotiates load reduction agreements with multiple customers and “aggregates” these customers to provide UNSE with a guaranteed load reduction upon request.
C&I Facilities	Existing, with new measures proposed	Persuade business customers to install high-efficiency equipment at their facilities and encourage contractors to promote the Program.

PROGRAM DESCRIPTION – TABLE 3 (Behavioral)

Behavioral Sector		
Program Name	New (Proposed) or Existing	Description
Behavioral Comprehensive	New (Proposed) and Existing Components	A variety of educational/behavioral programs, including direct canvassing, K-12 education (moving from Education and Outreach, now Consumer Education and Outreach), community education and CFL giveaway outreach events.
Home Energy Reports	New (Proposed)	Energy reports comparing a customer’s usage to that of their neighbors. Reviewed herein as part of the Behavioral Comprehensive Program. Will absorb the on-line audit tool function from the existing Education and Outreach (now Consumer Education and Outreach) Program.

PROGRAM DESCRIPTION – TABLE 4 (Support)

Support Sector		
Program Name	New (Proposed) or Existing	Description
Residential Energy Financing	New (Proposed)	Low-interest unsecured loans for energy efficiency measures installed in existing homes
Energy Codes Enhancement Program	New (Proposed)	Seeks to improve the level of compliance with existing local building energy codes and supports the periodic updating of these codes.
Consumer Education and Outreach	Existing. On-line Energy Audits and Academic Education components transferred to Behavioral Comprehensive sector programs.	Consumer education designed to increase participation in the UNSE Implementation Plan and promote changes in behavior.
Support and Program Development	Existing, tracks with portfolio program requirements	Costs for program design, development and resources necessary to meet reporting requirements of the EE Standard

BUDGETS: 2011 and 2012

The approved 2010 energy efficiency program budgets total approximately \$2.1 million. Below are the proposed budgets for the UNSE Implementation Plan, by sector, program and category for 2011 and 2012. Although the budgets for two years are included herein, the programs will not conclude at the end of those two years but, instead, will continue until further Commission action. The Implementation Plan budgets were updated in September 2011, in the Notice of Filing Updated Information In Support of [the] 2011-2012 Electric Energy Efficiency Implementation Plan. The tables below reflect the updated budgets.

UPDATED UNSE EE IMPLEMENTATION PLAN BUDGET 2011 TABLE

Sector	Program Name	Incentives	Program Delivery	Program Marketing	Program Administration	Evaluation	Total
Residential	Efficient Products	\$241,500	\$220,887	\$69,358	\$10,204	\$16,258	\$558,208
	Appliance Recycling	\$2,100	\$12,087	\$6,384	\$2,915	\$939	\$24,427
	Residential New Construction	\$110,000	\$88,400	\$29,760	\$2,915	\$9,243	\$240,318
	Existing Homes/Audit Direct Install	\$291,725	\$303,883	\$89,341	\$2,915	\$20,636	\$708,501
	Shade Tree	\$2,800	\$14,697	\$875	\$2,915	\$852	\$22,139
	Low-Income Weatherization	\$324,000	\$10,932	\$3,349	\$2,915	\$10,236	\$351,433
	Multi-Family	\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal	\$972,125	\$650,887	\$199,068	\$24,781	\$58,164	\$1,905,026
Commercial	C&I Facilities	\$330,172	\$284,475	\$43,025	\$13,848	\$26,861	\$698,380
	Bid for Efficiency (Pilot)	\$0	\$1,715	\$257	\$1,458	\$137	\$3,567
	Retro-Commissioning	\$0	\$0	\$0	\$0	\$0	\$0
	Schools Facilities	\$8,178	\$60,005	\$3,614	\$17,000	\$3,552	\$92,348
	Subtotal	\$338,349	\$346,194	\$46,896	\$32,306	\$30,550	\$794,296
Behavior	Home Energy Reports	\$148,500	\$36,087	\$9,229	\$7,289	\$8,044	\$209,150
	Behavioral Comprehensive	\$4,675	\$18,706	\$5,000	\$2,915	\$1,252	\$32,549
	Subtotal	\$153,175	\$54,794	\$14,229	\$10,204	\$9,296	\$241,698
Support	Consumer Education and Outreach	\$0	\$132,500	\$4,500	\$2,041	\$2,781	\$141,822
	Residential Energy Financing	\$4,006	\$41,365	\$34,232	\$2,915	\$3,450	\$85,968
	Codes Support	\$0	\$18,540	\$2,781	\$0	\$853	\$22,174
	Program Development, Analysis and	\$0	\$166,000	\$0	\$0	\$0	\$166,000

THE COMMISSION

January 3, 2012

Page 5

	Reporting Software ¹						
	Subtotal	\$4,006	\$358,405	\$41,513	\$4,956	\$7,084	\$415,964
	TOTAL	\$1,467,655	\$1,410,281	\$301,706	\$72,248	\$105,094	\$3,356,984
Percentage of Total Budget		44%	42%	9%	2%	3%	100%

*For the Low-Income Weatherization Program, payments to the community action agencies responsible for managing and implementing the weatherization projects are classified as incentives.

UPDATED UNSE EE IMPLEMENTATION PLAN BUDGET 2012 TABLE

Sector	Program Name	Incentives	Program Delivery	Program Marketing	Program Administration	Evaluation	Total
Residential	Efficient Products	\$416,143	\$221,561	\$95,655	\$10,510	\$22,316	\$766,185
	Appliance Recycling	\$40,250	\$153,916	\$19,417	\$3,003	\$8,663	\$225,249
	Residential New Construction	\$87,500	\$211,514	\$44,852	\$3,003	\$13,875	\$360,743
	Existing Homes/Audit Direct Install	\$399,125	\$335,274	\$110,160	\$3,003	\$25,427	\$872,989
	Shade Tree	\$14,000	\$19,232	\$1,662	\$3,003	\$1,516	\$39,412
	Low-Income Weatherization	\$324,000	\$11,215	\$3,352	\$3,003	\$10,247	\$351,817
	Multi-Family	\$14,725	\$37,958	\$5,268	\$3,003	\$2,438	\$63,393
	Subtotal	\$1,295,743	\$990,670	\$280,366	\$28,528	\$84,482	\$2,679,788
Commercial	C&I Facilities	\$330,472	\$318,013	\$64,848	\$14,264	\$29,104	\$756,700
	Bid for Efficiency (Pilot)	\$240,000	\$27,943	\$40,191	\$3,003	\$12,445	\$323,583
	Retro-Commissioning	\$198,000	\$13,730	\$31,759	\$3,003	\$9,860	\$256,352
	C&I Demand Response	\$392,700	\$321,300	\$0	\$87,138	\$20,000	\$821,138
	Schools Facilities	\$154,222	\$23,404	\$9,414	\$3,003	\$7,602	\$197,645
	Subtotal	\$922,694	\$383,089	\$146,214	\$23,273	\$59,011	\$2,355,418
Behavior	Home Energy Reports	\$192,450	\$22,819	\$10,763	\$7,507	\$9,342	\$242,881
	Behavioral Comprehensive	\$174,066	\$155,935	\$25,000	\$3,003	\$14,320	\$372,324
	Subtotal	\$366,516	\$178,753	\$35,763	\$10,510	\$23,662	\$615,205
Support	Consumer Education and Outreach	\$0	\$132,500	\$4,500	\$2,102	\$2,782	\$141,884
	Residential Energy Financing	\$40,059	\$194,431	\$34,314	\$3,003	\$6,297	\$278,104
	Codes Support	\$0	\$23,044	\$3,457	\$1,652	\$1,126	\$29,278
	Program	\$0	\$170,980	\$0	\$0	\$0	\$170,980

¹ Although classified as delivery costs by the Company, this budgetary item relates more to overall Implementation Plan management than to the delivery of specific programs.

	Development, Analysis and Reporting Software						
	Subtotal	\$40,059	\$520,954	\$42,271	\$6,757	\$10,205	\$620,245
	TOTAL	\$2,625,012	\$2,073,466	\$504,614	\$69,067	\$177,360	\$6,270,657
Percentage of Total Budget		42%	33%	8%	1%	3%	100%

SAVINGS: 2011 AND 2012

UNSE reports that the Company does not anticipate meeting the EE standards for 2011 and 2012. In its filing of updated information on September 1, 2011, in support of the 2011-2012 Implementation Plan, UNSE requested a waiver and modification of the EE standards. The following table shows UNSE's projected savings by year. The projections for 2012 have been modified by Staff to reflect the likely range of potential savings for 2012.

Year	Retail Energy Sales (MWh)	Projected Incremental Annual Energy Savings (MWh)	Projected Cumulative Annual Energy Savings (MWh)	Cumulative Annual Savings as a % of previous year Retail Sales	Cumulative EE Standard
2010	1,857,160				
2011	1,911,820	14,067	14,067	0.76%	1.25%
2012		25,065-30,077	39,132-41,144	2.05-2.31%	3.00%

Increasing the current budget in order to meet the 2012 standard could be potentially burdensome for customers. Moreover, UNSE has indicated that an increase to the budget would not result in it achieving the level of savings set under the EE Standard. The Company indicated that it has limited opportunities in the UNSE service territory and needs time to ramp up new programs and measures.

Staff acknowledges that achieving the 2011 and 2012 standards may be difficult because of the timing of the approval of the Implementation Plan. Therefore, a waiver should be granted for 2011 and 2012. Staff further recommends that the cumulative standard to achieve by 2020 not be waived at this time. Staff recommends that, going forward, savings be enhanced through an increased focus on the approved measures or programs producing the most savings per dollar spent. Both Residential and Non-residential sectors should have reasonable and equitable access to Implementation Plan programs, but resources and spending should emphasize participation for those programs or measures providing the highest energy savings at the lowest cost.

INCENTIVE SUMMARIES

The tables below provide summarize information concerning existing and proposed per unit incentives for measures for each program belonging to the UNSE Implementation Plan. Additional details concerning the incentives are included in the individual sections devoted to each program herein.

INCENTIVE SUMMARY TABLE 1 (Residential)

RESIDENTIAL SECTOR	
Program Name	Incentives
Appliance Recycling	\$35 (Company proposed); \$30 (Staff proposed)
Multi-Family	\$2-\$40 per unit for measures installed as part of the Direct Install component. These incentive amounts reflect the value of the installed measures.
Efficient Products (formerly the CFL Buy-Down Program)	\$10-\$200 per unit
Low Income Weatherization	Up to \$3,000. Funding is paid to weatherization agencies once weatherization work is documented.
Residential New Construction	Tier 1=\$400 per home Tier 2=\$1,500 per home Tier 3=\$3,000 per home
Existing Homes and Audit Direct Install (formerly the Residential HVAC Program)	\$250 to \$1,700 per measure
Shade Tree	\$15 coupon/credit on electric bill.

INCENTIVE SUMMARY TABLE 2 (Commercial)

Commercial Sector	
Program Name	
Bid for Efficiency – Pilot	Varies. Up to 60% of incremental cost.
Retro-Commissioning	\$22,000 average per 100,000 square foot.
Schools Facilities	Varies. Depending on measure, up to \$6,535 for custom measures
C&I Demand Response	Varies. Third party contractor negotiates load reduction agreements, including incentives, with multiple customers.
C&I Facilities	\$2-\$150 per unit or measure \$1,371 per building for Reduced Lighting Power Density measure

INCENTIVE SUMMARY TABLE 3 (Behavioral)

Behavioral Sector	
Program Name	
Behavioral Comprehensive	CFLs and other lower-cost measures provided. No financial incentives.
Home Energy Reports	Not applicable.

INCENTIVE SUMMARY TABLE 4 (Support)

Support Sector	
Program Name	
Residential Energy Financing	Loan program.
Energy Codes Enhancement Program	Not applicable.

RESIDENTIAL PROGRAMS

A. APPLIANCE RECYCLING

Program Description. UNSE's proposed new Appliance Recycling Program ("Appliance Program") is designed to remove and recycle inefficient working refrigerators and freezers. UNSE cites national studies indicating that approximately 20% of customers have at least one secondary inefficient refrigerator or freezer in their home, suggesting a significant potential for energy savings in this sector. The goal is to recycle 1,035 refrigerators and 115 freezers per year. The Appliance Program would offer residential customers a \$35 incentive, plus free pick-up and recycling for working, but inefficient, refrigerators and freezers.

The Appliance Recycling Program permanently removes inefficient appliances that might otherwise remain in service, either at the customer's home, or elsewhere through donation or resale. In addition, the recycling program removes the usual barriers to taking these appliances offline by eliminating both the cost and the inconvenience associated with disposing of inefficient appliances.

Program Objectives and Rationale. Second refrigerators and freezers are usually older models and are often less efficient and more costly to operate than up-to-date efficiency appliances. UNSE estimates an average monthly dollar savings for its customers of \$8.96 for refrigerators and \$6.92 for freezers for its customers. Savings can go higher. The Energy Star site notes that, while replacing a refrigerator from the 1980s can save over \$100 per year, replacing a refrigerator from the 1970s can save more than \$200 per year.

Eligibility. The Program is open to UNSE residential customers with operable inefficient refrigerators or freezers of between 10 and 30 cubic feet in size. Households are limited to two recycling rebates per year.

Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing Strategy. The Appliance Program would utilize an experienced appliance recycling contractor, JACO, to: (i) market the program; (ii) verify customer's eligibility; (iii) process incentives; (iv) pick up eligible appliances; and (v) responsibly recycle the appliances.

The UNSE application emphasizes that prompt processing of incentive payments is essential to customer satisfaction.

Program Analysis/Issues. Because JACO requires 10,000 units per year for three years to recover the construction cost for a recycling facility, it would be cost-prohibitive for JACO to build a facility in the UNSE territory. Instead, JACO would store appliances from UNSE's southern territory with TEP appliances until a full semi-truck load is available for transport to the Phoenix recycling facility. In UNSE's northern territory, appliances will be transported to Las Vegas, which is closer to the Company's northern territory than Phoenix.

JACO's website states that it completely deconstructs each unit and safely disposes of toxins and ozone-depleting chlorofluorocarbon gases (CFC-11). JACO ensures that over 95% of the components and materials are recycled or "eliminated in an environmentally responsible way."

Cost-Effectiveness. Based on Staff's analysis, the refrigerator measure has a benefit-cost ratio of 2.69 and the freezer measure has a benefit-cost ratio of 2.04, making both measures cost-effective.

Staff Recommendation. Staff recommends that the UNSE Appliance Recycling Program be approved and that it include both the refrigerator and freezer measures.

Staff also recommends that the Company offer a \$30 incentive, rather than the \$35 incentive proposed, but that the overall budget for incentives not be decreased. A \$30 incentive would be consistent with the incentives offered under the Arizona Public Service Company ("APS") and the Salt River Project ("SRP") appliance programs, and would allow more UNSE customers to participate, potentially removing more inefficient appliances from the grid. (The proposed total incentive budget for 2012 is \$40,250. A per-unit incentive of \$35 would allow up to 1,150 UNSE customers to participate, while an incentive of \$30 would allow up to approximately 1,340 UNSE customers to participate.)

Staff also recommends that the Appliance Recycling Program be expanded to include non-residential customers with extra working refrigerators or freezers eligible for recycling, with the same limit of two appliances per year, per customer. Expanding eligibility to non-residential customers with eligible appliances would provide more UNSE customers, particularly small businesses, with an opportunity to participate in the Appliance Recycling Program. Such expanded eligibility potentially enhances participation levels and could help to get additional inefficient appliances permanently off the grid.

B. Multi-Family Housing Efficiency Program

Program Description. The proposed new Multi-Family Housing Efficiency Program (“Multi-Family Program”) would promote energy efficiency in the residential multi-family sector, to properties with five or more units. The Multi-Family Program is designed to overcome barriers typical to the multi-family housing market, which has limited participation in energy efficiency programs. UNSE’s Multi-Family program is designed to mirror the approved APS Multi-Family program.

The Multi-Family Program would offer property owners and managers the following options: (i) direct installation of CFLs, low-flow showerheads and faucet aerators; and (ii) improvements to common areas handled by the C&I Facilities Existing Facilities (“C&I Facilities”) Program. Once the Multi-Family Program has ramped up and matured, UNSE will look into developing a third track for existing complexes that are not part of a major renovation or rehabilitation. If cost-effective, and if approved by the Commission, this third track would focus on improvements to the building shell, including insulation and air sealing.

Objectives and Rationale. Multi-family housing offers large potential savings through economies of scale, but this has been a difficult sector to reach, in part because owners may not directly benefit from improving energy efficiency. By reducing key market barriers and targeting key decision makers, the Multi-Family Program may produce energy savings in this under-addressed market segment.

The objectives of the Multi-Family Program are to:

- Reduce peak demand and overall energy consumption in the multifamily housing market segment;
- Promote energy efficiency retrofits of both dwelling units and common areas in this market segment;
- Increase overall awareness about the importance and benefits of energy efficiency improvements to the landlord and property ownership community; and
- Help meet the energy savings targets of the UNSE DSM Implementation Plan.

Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing Strategy. Delivery of the direct installation, rehabilitation and new construction components of the Program will be handled by an implementation contractor.

Marketing and communications strategies will include website updates, local newspapers and radio, bill messages and bill inserts, training seminars, call center on-hold messages, direct mail promotion, outreach to rental housing industry associations, and work with contractors and industry specialists. A primary emphasis will be placed on larger, older, and less efficient complexes.

Program Analysis/Issues. Barriers to energy efficiency programs in the multi-family market segment include: (i) split incentives, (ii) lack of capital, and (iii) lack of information about energy efficiency improvements. These barriers are described in more detail, below.

Split Incentives. "Split incentives" describes the problem that arises in promoting energy efficiency in rental units. The builders who construct rental properties, and the owners who would be responsible for upgrades, do not usually pay the energy bills. Consequently, builders and owners do not directly benefit from the lower energy costs that arise from investing in efficiency measures, reducing or eliminating their incentive to participate in energy efficiency programs. At the same time, the renters who would benefit from lower energy bills have no direct influence over original construction and, with respect to renovations or retrofits, may not have the authority, the incentive or the means to invest in energy efficiency for housing they do not own.

Lack of Capital and Awareness. Other problems can include a lack of capital for improvements and a lack of awareness about energy efficiency. The Multi-Family Program would address both through direct installation of low cost energy efficiency improvements in existing complexes and through energy efficiency improvements to common areas through the C&I Facilities Existing Facilities Program.

Commercial Versus Residential Multi-Family Housing. Another issue is that ownership and decision-making tends to vary for multi-family housing, depending on the number of units. Properties with 2-4 dwelling units typically fall under residential financing guidelines and, for these smaller properties, the decision-makers are usually individuals. Larger properties with 5 dwelling units or more typically fall under commercial lending guidelines and decision-makers (at least for larger complexes) are typically corporate, institutional, or trusts (e.g., Real Estate Investment Trusts). As such, the decision-making process and access to capital varies between these two market segments. With this distinction in mind, the Company believes that the 2-4 unit market segment can be best served by the Residential Existing Home and Audit Direct Install Program, while the 5+ Multifamily Housing market segment would be served by the proposed Multifamily Program.

Cost-Effectiveness. Based on Staff's analysis, the benefit-cost ratio for each of the three proposed direct install measures is: (i) CFLs 2.8; (ii) low-flow showerheads 2.3; and faucet aerators 2.9. All three measures have benefit-cost ratios above 1.0, making them cost-effective.

As noted elsewhere, improvements to common areas will be a part of the C&I Facilities Existing Facilities Program. Costs and savings associated with the common area improvements will, accordingly, be tracked as a part of that program.

Staff Recommendation. Staff recommends that the proposed Multi-Family Program be approved, but that older, less efficient and low-income complexes be a primary focus for the Multi-Family Program's activities.

RESIDENTIAL EXISTING PROGRAMS (WITH PROPOSED MODIFICATIONS)

C. Efficient Products

Program Description. This is an existing Residential program previously approved by the Commission in Decision No. 70556 (October 23, 2008), with four proposed new measures. The Efficient Products Program (formerly called the CFL Buy-Down Program) would promote the purchase of energy efficient retail products through in-store buy-down promotions. In addition to the existing CFL measure, four new measures are proposed for the Efficient Products Program, beginning in 2012. The measures and proposed incentives are as follows: (i) Variable Speed Pool Pump (\$200 per unit); (ii) Pool Pump Timer (\$75 per unit); (iii) Residential LED light (\$30 per bulb) and (iv) Advanced Power Strips (\$10 per sensor). CFL incentives vary by type of CFL, but the average is \$1.15 per unit.

Program Objectives and Rationale. The new measures will offer residential customers additional opportunities to increase energy efficiency. The Efficient Products Program promotes market transformation through retail partnerships, training for retail staff, and increased stocking and selection of efficient retail products.

Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. UNSE is not proposing any significant changes in implementation approach or delivery strategy, except for the addition of new measures starting in 2012. Delivery channels for the new measures will continue to be via a combination of both buy-downs and possible mail-in rebates with participating retailers. Program marketing is primarily through mass-market channels (e.g., radio, newspaper, website, etc.) and through education and training of participating retailers.

Program Analysis/Issues. While there are reports questioning the life expectancy of CFLs in practice, there is currently little actual study data on the lifespan of CFLs. (Verification testing requires only that eight out of ten units operate for 40% of rated life.) Assumptions regarding the lifespan of CFL measures should be re-evaluated for the Company's next Implementation Plan, and any changes to these assumptions should be incorporated into cost-effectiveness and savings calculations for the Efficient Products Program.

The Company indicated that it can not reasonably predict the level of participation for the Pool Pump Timer and Variable Speed Pool Pump measures for the UNSE Plan. The absence of chains marketing pool accessories in the UNSE territory means that stores will need to be approached on an individual basis, making the level and timing for participation uncertain.

Cost-Effectiveness. Three of the four proposed new measures have benefit-cost ratios above 1.0, making them cost-effective. Although UNSE supplied no estimates on participation for the Variable Speed Pool Pump and Pool Pump Timer measures, Staff determined that both measures would be cost-effective if participation levels reached 250 annually or 5% of the levels projected for the other new proposed measures.

The Variable Speed Pool Pump has a benefit-cost ratio of 1.29, the Advanced Power Strips have a benefit-cost ratio of 1.1, and the Pool Pump Timer measure has a benefit-cost ratio of 2.16. The Residential LED light has a benefit-cost ratio of 0.72, well below 1.0. (The lower benefit-cost ratio is largely due to energy savings that are low compared to the incremental cost of the measure.)

Staff Recommendations.

- Staff recommends that the Efficient Products Program be approved, and continue to offer CFLs, with the addition of the Variable Speed Pool Pump, Advanced Power Strip and Pool Pump Timer measures.
- Staff also recommends that the Residential LED Light measure not be approved at this time, but that the budget associated with Residential LED Light measure be re-allocated to the Efficient Products Program measures approved by the Commission.
- Staff recommends that the lifespan of CFL measures should be re-evaluated for the Company's next Implementation Plan, and any changes to these assumptions be incorporated into cost-effectiveness and savings calculations for the Efficient Products Program.

D. Low-Income Weatherization

Program Description. UNSE is proposing a change in eligibility for this program. The Low-Income Weatherization ("LIW") Program is an existing program (Decision No. 70347, May 16, 2008) designed to conserve energy and lower utility bills for UNSE households with limited incomes. The primary goal of the LIW Program is to fund weatherization for low-income homes, to reduce energy costs and improve comfort and safety for low-income customers. The LIW Program also conserves energy, and reduces both electric and gas consumption.

Program Objectives and Rationale. The objective of the Program is to coordinate with the Arizona Energy Office (now the Governor's Office of Energy Policy ("OEP")) to follow state Weatherization Assistance Program rules in using UNSE ratepayer funds to lower household energy consumption for low-income customers and increase the number of weatherized homes.

Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing Strategy. The Program is delivered through the Western Arizona Council of Governments ("WACOG"), Northern Arizona Council of Governments ("NACOG") and Southeastern Arizona Community Action Program ("SEACAP"). All are State-approved weatherization agencies, providing program administration, planning, program promotion, coordination, participant eligibility and priority, labor, materials, equipment and tracking. Funding is provided to the agencies upon documentation of work completed.

Due to the popularity of the Program, DSM revenues are not allocated to advertising and promotion. Promotion takes place through presentations to community organizations, through information left at community and recreation centers, and through calls directed from UNSE. UNSE also promotes the Program on its website and through speaking engagements and outreach presentations.

Eligibility. UNSE is proposing to tie the eligibility level for the UNSE LIW Program to the eligibility level set for the federal Low-Income Home Energy Assistance Program ("LIHEAP"). Currently, eligibility for the UNSE LIW Program is set at 150 percent of the federal poverty level, while the federal LIHEAP eligibility level is set at 200 percent. Matching the UNSE LIW eligibility level with LIHEAP (whether increasing or decreasing) would streamline the administrative process for community action agencies delivering the Program and may allow the Program to serve more customers.

Cost-Effectiveness. Staff reviewed the cost-effectiveness of the Low-Income Weatherization Program based on the most recent available data. The benefit-cost ratio for the Low-Income Weatherization Program is 1.01, slightly above the level required for cost-effectiveness.

Staff Recommendation. The Low-Income Weatherization Program enhances the energy efficiency of low-income Residential houses on a cost-effective basis, reducing utility costs and improving the health and safety for low-income customers.

- Staff recommends that the Low-Income Weatherization Program be approved for continuation as part of UNSE's Implementation Plan.
- Staff also recommends that UNSE be allowed to tie the eligibility level for the UNSE LIW Program to the eligibility level set for the federal Low-Income Home

Energy Program (“LIHEAP”), so that the eligibility levels remain consistent over time.

E. Residential New Construction

Program Description. The Residential New Construction (“RNC”) Program, also known as the Zero Net Energy Homes (“ZEH”) Pilot Program, is a continuation of the existing program design that was approved by Decision No. 71641 (April 14, 2010). The Company has requested to continue the RNC Program without modifications.

The RNC Program is designed with an incentive schedule that awards larger incentives for more efficient homes. The incentive schedule for the RNC Program provides a \$400 incentive for each Tier 1 home, a \$1,500 incentive for each Tier 2 home, and a \$3,000 incentive for each Tier 3 home.

To qualify for an incentive, homes must be tested by an approved energy rater, and meet one of the three tiers in the RNC Program based on a Home Energy Rating System (“HERS”) Index score. On the HERS index scale, a score of 100 is considered the average efficiency of baseline new construction, while a HERS index score of 0 represents a home that produces all of its energy through on-site generation from renewable energy. In other words, the lower the HERS score, the more efficient the home. Under the RNC Program, Tier 1 requires a minimum HERS score lower than or equal to 85; Tier 2 requires a HERS score lower than, or equal to, 70; and Tier 3 requires a HERS score lower than, or equal to, 45.

Program Objectives and Rationale. The objectives of the RNC Program are to advance energy efficient building practices through builder training, and to increase customer awareness of the benefits associated with energy efficient construction, combined with application of renewable technologies, such as solar photovoltaic and solar hot water systems consistent with achieving the goals of the Arizona Renewable Energy Standard.

Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing Strategy. Program delivery is provided by UNSE, and through participation of independent Residential Energy Services Network (“RESNET”) approved home energy raters. UNSE provides outreach to targeted builders, conducts builder training on marketing ENERGY STAR homes and on the ENERGY STAR performance standard, and mentors participating builders and raters.

The Program is marketed to select builders primarily through direct business-to-business contacts. The Program is marketed to consumers at home shows, parade of homes, and other events focused on homebuilding as advertised through mass market and targeted media outlets.

Cost-Effectiveness. In Decision No. 71641 (April 14, 2010) Tiers 2 and 3 were added to the existing Residential New Home Construction Program (previously approved in Decision No. 70522. September 30, 2008). Tier 2 was cost-effective at a benefit-cost ratio of 1.16 without a monetized value for carbon. No benefit-cost analysis of Tier 3 was done because, according to information provided by UNSE, the only difference between Tier 2 and Tier 3 were the additional costs for solar measures.

The Decision No. 71641 the Company was also ordered to provide information on the performance of the Program, by Tier, and to file an application to continue, modify, or terminate the pilot program forty-two months after the date of the decision (April 14, 2010). The Company has complied with the Decision by providing per-Tier information in its semi-annual filings with the Commission. The 42-month filing is due in October 2013.

Staff Recommendation. Staff recommends that the UNSE RNC Program be approved for continuance pending action on the Company's forty-two month filing, as referenced in Decision No. 71641.

F. Existing Homes and Audit Direct Install

Program Description. The Existing Homes and Audit Direct Install ("Existing Homes") Program is an existing program that replaced the former Residential HVAC Program (approved by Decision No. 72024 on December 10, 2010). No modification of this Program is being proposed in the current filing.

The Existing Homes Program is targeted to existing homes in need of energy efficiency improvements. The Program has two components, an initial energy audit with direct install of CFLs and advanced power strips, followed by identification of actionable, larger scale home energy efficiency improvements and referral to local Building Performance Institute ("BPI") certified contractors to implement major home energy improvements such as insulation, air-sealing and HVAC. Rebates are paid to contractors for HVAC and thermal envelope measures, with incentives ranging from \$250 to \$1,700 per measure. The current average total incentive per participating home is approximately \$1,400. UNSE plans to submit the Existing Home Program to EPA with a request to utilize EPA labeling as Home Performance with ENERGY STAR.

Program Objectives and Rationale. The Existing Homes Program achieves energy and demand savings from the installation of energy efficient measures and contributes toward transforming the industry to emphasize best practice building science principles. The Existing Homes Program invests in training and mentorship of participating contractors to understand the "house as a system" building science and to achieve BPI certification. UNSE has included a Residential Financing Pilot Program in this Plan for 2011-2012 which will be used to enhance participation in this program.

Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing Strategy. UNSE provides program management oversight and marketing. A third party implementation contractor will be responsible for recruitment, training, and mentorship of participating contractors and trained energy auditors, data tracking, rebate processing and technical support. Auditors will provide referrals to BPI-certified contractors, and referral information will be reported to UNSE. Measure installation to residential customers will be provided by participating independent contractors. In 2011-2012, program delivery will be coordinated with APS and Southwest Gas Corporation ("Southwest Gas") to address programming overlap among the utilities.

UNSE provides program marketing and customer awareness-building through website promotion, community interest groups, mass-market channels (e.g. radio, newspaper, etc.), brochures and bill inserts, high bill inquiries, trade ally marketing efforts, contractor enrollment and training.

Cost-Effectiveness. The enhanced Existing Homes Program was approved in December 2010, with a benefit-cost ratio of 1.06 (1.20 if natural gas savings are included), making the Program cost-effective. No modifications of the Program have been proposed, so a recalculation of cost-effectiveness was not necessary.

Staff Recommendation. Staff recommends that the Existing Homes and Audit Direct Install Program be approved for continuance.

G. Shade Tree

Program Description. The Shade Tree Program is an ongoing program, approved in Decision No. 70523 (September 30, 2008) and approved for continuance in Decision No. 71834 (August 10, 2010). No modifications have been proposed for the Shade Tree Program. The Shade Tree Program promotes energy conservation and environmental benefits by motivating customers to plant desert-adapted trees in locations where the trees will provide shade and reduce HVAC load.

Program Objectives and Rationale. The objectives of the Program are to promote the strategic planting of trees to provide shade, thereby reducing the cooling load of homes and associated energy usage and to educate school-age children and the public on the conservation and environmental benefits of planting trees.

Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing Strategy. The UNSE Shade Tree Program provides a \$15 per tree incentive to customers. Customers submit an application, along with receipts, for credits on their electric bills. Marketing is done through bill inserts, outreach presentations, the UNSE website and through communications with participating retailers.

Cost-Effectiveness. In Decision No. 71834, Staff calculated the benefit-cost ratio for this Program at 1.29, making it cost-effective. No modifications have been proposed for this Program.

Staff Recommendation. Staff recommends that the UNSE Shade Tree Program be approved for continuance.

H. Bid for Efficiency

Program Description. Under UNSE's Bid for Efficiency Program ("BFE Program"), customers or project sponsors would conceive their own projects and then bid competitively for incentives within broad program guidelines. UNSE would then select winning applicants based on specified criteria.

BFE Program participants and project sponsors may include commercial customers, Energy Service Companies ("ESCOs") or other aggregators who organize proposals that involve multiple sites.

Program Objectives and Rationale. The BFE Program seeks to encourage customers and project sponsors to think holistically regarding energy systems and to develop projects designed to optimize system energy use by encouraging a systems approach to energy efficiency.

The BFE Program would provide an incentive for participants to use multiple EE approaches at one or several sites simultaneously. The subject Program attempts to address customer market barriers such as small savings levels at multiple sites, longer payback periods and organizing implementation contractors.

UNSE's implementation goals for the Program are as follows:

- Ensure projects are submitted, approved, implemented and verified in a timely manner;
- Allow each project to be customer-driven; responsibility will be placed on the customer (or project sponsor) to select appropriate trade and professional allies to design and implement the project and to prepare the incentive application;
- Encourage implementation of multiple measures for comprehensive projects; and

- Encourage aggregated applications that involve implementation at multiple sites.

Budget. See the UNSE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. The BFE Program will focus on market segments with significant savings potential, unique load or energy savings characteristics, and those that require specialized delivery or support services. The target market consists primarily of larger customers and customer groups that may include grocery stores, convenience stores, or data centers, business sectors that have historically been hard to reach.

Eligibility. Any entity, customer, or project sponsor may participate if the proposal meets the minimum application requirement of 200,000 kWh in savings for the first year. Electric loads may be aggregated among multiple facilities to meet the kWh threshold. Eligible project sponsors may include, but are not limited to UNSE customers, ESCOs and engineering / architecture firms. Any third-party project sponsor must submit an application with the consent and support of the identified UNSE customer. To provide participants with maximum flexibility, the Program will not explicitly specify eligible measures, but pre- and post-installation metering will be required to ensure that savings estimates are in line with actual savings produced by the projects. All proposed measures must meet the following requirements:

- Produce a measurable and verifiable reduction in energy consumption;
- Produce savings through an increase in energy efficiency or better utilization of energy through improved production equipment or controls;
- Be installed in a retrofit application;
- Have a useful life of five years or greater; and
- Prove cost effective using the Societal Cost Test (applies to total project including all measures).

Examples of eligible measures include, but are not limited to, installation of Premium® efficiency motors, lighting system upgrades, HVAC system improvements, heat recovery systems, and energy system control upgrades. Project sponsors are free to propose measures, as long as the above requirements are met. UNSE anticipates an average incentive of \$0.15 / kWh, based on multiple measures with varying savings. With average savings of 400,000 kWh per project, the average incentive would be \$60,000.

The following implementation process is proposed for the BFE Program:

- UNSE, and/or its implementation contractor (“IC”), will advertise the BFE Program to target customers and trade allies;
- Customers or trade allies will submit bids for its EE projects.
- UNSE/IC will evaluate projects and make awards;
- UNSE/IC will perform pre-installation metering;
- Customer will implement the proposed project;
- UNSE will pay 50 percent of the incentive amount prior to installation;
- UNSE/IC will perform post-installation metering; and
- UNSE will pay the remaining incentive amount based on the actual M&V energy savings (based on first year operation).

UNSE proposes to implement the BFE Program as a pilot during 2011 and 2012. Pilot results would be evaluated in 2013. If the market response and measure savings indicate the Program is cost-effective, and achieving substantial savings, the Company would continue the Program offering in its 2014 EE Implementation Plan.

Program Analysis/Issues. The BFE concept is being used by several other western utilities, including San Diego Gas & Electric in California and Xcel Energy in Colorado. With a focus on whole-building efficiency, coupled with the ability of participants to select from a wide range of potential efficiency measures, the BFE Program could offer an opportunity to customers and project sponsors to design cost-effective energy efficiency projects.

Under UNSE’s proposal, 50 percent of the incentive for each project is paid prior to measure installation, with the remaining incentive amount based on the actual energy savings, paid after the first year of operation. Staff believes this payment sequence offers an important “true-up” opportunity that ensures projects receive incentives proportionate to their actual energy efficiency. However, Staff is concerned that there are no limits proposed for the maximum incentive available to an individual project. Therefore, Staff recommends that incentives be capped at 60 percent of the incremental cost of the efficiency measures utilized in the project.

UNSE estimates annual energy savings of 400,000 kWh, and peak demand savings of 36.53 kW for each of the 10 projects anticipated during the two-year pilot program. Based on these anticipated savings, Staff has determined that the BFE Program would have a benefit / cost ratio of 1.78, indicating that the Program would be cost-effective.

Staff Recommendations

- Staff recommends that the UNSE Bid for Efficiency Pilot Program be approved as a two-year pilot program as discussed herein.
- Staff has further recommended that individual project incentives under this program be capped at 60 percent of the incremental costs of the efficiency measures included in the project.

I. RETRO-COMMISSIONING PROGRAM

Program Description. UNSE's proposed Retro-Commissioning Program ("RCx Program") would identify deficiencies in existing facilities and makes necessary adjustments to produce energy savings and other benefits such as occupant comfort. The proposed new RCx Program is geared to assist owners of large existing commercial and industrial facilities in improving energy performance. UNSE states that improvements made in response to RCx efforts are comparatively inexpensive to implement and typically offer paybacks of less than two years.

The RCx Program would begin with a Screening Energy Audit. Participants then proceed, if eligible for the RCx Program, through a three part retro-commissioning study: (i) the Operations and Maintenance Review Phase (operational procedures and maintenance practices); (ii) the Systems Commissioning Phase (performance testing, trending and metering), and (iii) the Systems Optimization Phase (high performance building operation strategies).

A 2009 study of retro-commissioning by Lawrence Berkley National Laboratories noted a median savings of 16 percent of whole building energy costs across 561 projects. Documented benefits of RCx programs include, but are not limited to the following:

- Up to 15 percent energy savings
- Reduced occupant complaints and improved occupant comfort
- Increased equipment life
- Increased facility documentation
- Facility staff training

Program Objectives and Rationale. The Program would target large facilities which have lighting, cooling, and ventilation as their largest energy uses. Large office and retail facilities represent the most effective building type for the RCx approach.

Budget. See UNSE Implementation Plan Budget Table herein, which lists the sector, projected costs per category and total budget for the program.

Delivery and Marketing Strategy. UNSE would offer an online application for customers interested in the RCx Program on the UNSE website. The screening audit would provide the customer with a basic energy audit, identifying basic equipment upgrades and control strategies that would result in energy savings for the customer. The audited facilities would also receive ENERGY STAR® Portfolio Manager ratings to benchmark the facility versus similar facilities in the area. The energy audit would be provided free of charge to all eligible applicants and will be used to determine eligibility for participation in subsequent phases of the RCx Program. The Program is designed so that customers can move to progressively higher levels of examination and analysis, only after they have implemented measures identified in the Screening Audit, and later, the Operations and Management Review phases of the Program.

For selected customers, and subsequent to the Screening Energy Audit, UNSE would perform an Operations and Maintenance (“O&M”) Review of the subject facility’s energy usage, to evaluate operational procedures and maintenance practices related to major equipment. The result of this review would be a list of facility improvement measures with estimated cost and savings values. Customers would also receive training on O&M best practices and guidance on implementing facility improvements. The O&M Review would be provided by UNSE at no cost to the customer.

For selected customers that implement recommendations identified in the O&M Review, UNSE would offer Systems Commissioning services. Systems Commissioning services utilize advanced performance testing, trending and metering procedures that identify further opportunities for energy system repairs, upgrades and replacements. Measures identified during this phase include repairs, upgrades and capital planning that would allow existing systems to operate within the parameters developed during the O&M review. Systems Commissioning services would be paid by the Program.

The final phase of the RCx Program is known as Systems Optimization. This phase of the Program builds on work completed in prior Program phases by introducing cutting-edge practices developed for today’s high performance buildings. Services for this phase would be provided by the Program for selected customers who implement recommendations identified during the Systems Commissioning phase of the Program.

Eligibility. The RCx Program will be available to UNSE commercial and industrial customers with at least one meter on Large Industrial and Commercial rate schedules (Large General Service, Large General Service - Time of Use, and Large Power Service). In addition, the facility must contain a minimum of 100,000 square feet of conditioned space and have at least one full-time facility operations/management staff.

Program Analysis/Issues. Presently, the lack of knowledge by building operators, the lack of qualified workers, and the upfront costs of the audit and associated equipment optimization are barriers to improving the energy efficiency of commercial and industrial facilities. The UNSE Retro-Commissioning Program intends to overcome these barriers by

providing facility owners with the information necessary to identify energy-saving opportunities and manage energy consumption at their facilities.

Cost-Effectiveness. UNSE estimates annual energy savings of 200,000 kWh, and peak demand savings of 18.26 kW for each of the five projects anticipated through the end of 2012. Based on these anticipated savings, Staff has determined that the BFE Program would have a benefit-cost ratio of 1.69, indicating that the Program would be cost-effective.

Staff Recommendations. Staff recommends that the UNSE Retro-commissioning Program be approved.

J. SCHOOL FACILITIES PROGRAM

Program Description. Schools represent a market segment that has historically been underserved. UNSE has proposed a School Facilities Program ("Schools Program") to increase participation in energy efficiency retrofits by schools.

The UNSE Schools Program would be open to participation by all existing kindergarten through twelfth grade school facilities in the UNSE service territory, including charter schools. The proposed Schools Program would utilize the same delivery method and pay incentives for the same energy efficiency measures as are found in the existing UNSE C&I Facilities Program ("C&I Program"), but the Schools Program would only service eligible schools. UNSE proposes to pay up to 100 percent of the incremental cost of the efficiency measures for the Schools Program, as compared to up to 85 percent for measures in the existing C&I Program.

The Schools Program would utilize an upstream market incentive design that provides incentives directly to contractors installing the energy efficiency measures. Specifically, the Schools Program would offer the following products and services:

- Educational and promotional pieces designed to assist contractors with the marketing of the Schools Program to schools; and
- Education and promotional efforts for schools and contractor allies on how the Schools Program functions, what energy efficiency technologies are offered, what incentives are provided and the benefits of the measures.

The lighting measures included in the Schools Program are:

- Retrofit of T12 fluorescent lighting with T8 lighting;
- Retrofit of standard T8 lighting to premium T8 lighting;
- Retrofit of high intensity discharge lighting with T8 or T5 lighting;

- Replacement of incandescent lamps with screw-in compact fluorescent lamps (“CFL”);
- Retrofit of existing incandescent and CFL exit signs with LED or electroluminescent exit signs;
- Lighting system occupancy sensors; and
- Delamping and reduced lighting power density.

The HVAC measures included in the Schools Program are:

- High efficiency air conditioners and heat pumps (incentives vary by SEER rating);
- Programmable thermostats; and
- Shade screens and window films to reduce solar heat gain.

The Schools Program would also include variable speed drive motors to optimize performance, vendor miser sensors which turn off or turn down refrigeration and lighting in vending machines when not in use, and smart strips to better control plug loads. Whole building custom incentive applications would also be considered where appropriate. Table 1-1 below presents a summary of the incentives offered for each measure.

**Table 1-1
School Facilities Efficiency Incentive Summary**

Lighting Measures	Incentive
Replace T12 systems with T8	\$55/fixture
Energy Efficient Integral Compact Fluorescent Lighting	\$11/lamp
Replace Incandescent & CFL Exit Signs	\$55/sign
Install Occupancy Sensors on Lighting Fixtures	\$96/sensor
Daylighting Controls	\$751/kW base load
Hard Wire CFL	\$15/bulb
HIDs to T8/T5	\$96/fixture
Induction Lighting	\$196/lamp
Outdoor CFL	\$9/lamp
Reduced Lighting Power Density (LPD)	\$4,472/customer
Screw-in Cold Cathode CFL	\$12/bulb
T8 to Premium T8	\$21/lamp
Delamping	\$6/fixture
HVAC Measures	
Programmable Thermostats	\$204/thermostat

High-efficiency Packaged AC and Heat Pumps (<65,000 btuh)	\$440 to \$1,321 (depending on size and SEER rating)
Shade Screens	\$4/sq.ft.
Window Films	\$3/sq.ft.
Motors	
Variable Speed Drives	\$377/HP
Plug Loads	
Beverage Controls (“Vending Miser”)	\$199/sensor
Snack Controls (“Vending Miser”)	\$103/sensor
Advanced Power Strips – Load Sensor	\$32/strip
Advanced Power Strips – Occupancy Sensor	\$90/strip
Advanced Power Strips – Timer Plug Strip	\$19/strip
Whole Building	
Custom Measures	\$6,535/customer

Budget. The Program will begin in 2012 with a proposed first-year budget of \$162,513. See the UNSE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. Schools that are interested in the Schools Program would apply for participation using an on-line proposal generation and project tracking system. This Internet-based system would provide an analysis of project costs and projected savings. Projects that are selected by UNSE based on projected energy savings would utilize contractors to provide turn-key installation services to schools. Incentives would be paid directly to the contractors.

UNSE would assign an in-house program manager to oversee the Schools Program, provide guidance on Schools Program activities and provide a point of contact for schools that are interested in participation, or have questions or concerns regarding the Schools Program. The implementation contractor would be responsible for program administration, application and incentive processing, monitoring activities of installation contractors, participation tracking and reporting, and overall quality control and management of the delivery process. In addition, the implementation contractor would conduct outreach to contractors, marketing and promotion to schools, and education and training on the benefits and functioning of the Schools Program.

Installation contractors would promote the Schools Program directly to schools, provide turn-key installation services and have access to the Schools Program Internet processing system to prepare proposals.

Program Analysis/Issues. The Schools Program lists a total of 24 individual energy efficiency measures that are eligible for incentives. This program is designed to install multiple measures on a “whole building” basis, where measures tend to complement or reinforce one another and, for this reason, cost-effectiveness is calculated on a per-project basis, where savings

and costs from a typical set of project measures are compared. The Schools Program also encourages the creative combination of listed measures with other measures that are not on the Schools Program's incentive list by offering a "custom measures" category. Proposed "custom measures" must demonstrate energy savings and pass the Societal Cost Test.

In order to evaluate the Schools Program at the project level, Staff analyzed a typical school energy efficiency project that included delamping a portion of the school facility and replacing the remaining lighting fixtures with T8 upgrades. In addition, the model project includes data for programmable thermostats, occupancy sensors, energy efficient exit signage, vending machine controls and advanced timer power strips. By combining these particular measures, and using anticipated savings values for each measure, Staff determined that this "typical" school project would cost approximately \$2,821 dollars in incentives while saving approximately 40,956 kWh of energy and 4.13 kW of demand load.

Cost-Effectiveness. Based on these anticipated savings, Staff has determined that the typical School Facilities Program project would have a benefit-cost ratio of 2.87, indicating that the Schools Program would be cost-effective. Staff further believes that this ratio is indicative of the benefits of similar projects that would be completed under the Schools Program.

Staff Recommendations. Staff recommends that the School Facilities Program be approved.

K. C&I Demand Response

Program Description. UNSE is requesting budget approval for a new C&I Demand Response Program that would manage peak demand and mitigate system emergencies. This program is part of the Company's Implementation Plan, and is part of the same docket, but was filed separately, on July 20, 2011. Reductions in peak demand from this program would be credited toward the Energy Efficiency Standard ("EES"), as permitted under R14-2-2404.C.

This is a commercial and industrial load curtailment program. Customers are compensated with incentives for their participation at negotiated levels that vary depending on multiple factors including the size of the facility, amount of kW under load control, and the frequency with which the resource can be utilized.

Program Objectives and Rationale. Commercial and industrial load represents a total of approximately 14 percent of system demand during peak hours in the late afternoon and evening during summer months. Modification of controls for chillers, rooftop AC units, lighting, fans, and other end uses can reduce power demand at peak times. In addition, the Program may be used to support standard benefits of demand-response programs which include avoided firm capacity required to meet reserve requirements, reduced or avoided open-market power purchases during periods of high energy prices, and greater grid stability and reduction in outages due to reduced grid demand.

Delivery and Marketing Strategy. The Program is delivered on a turnkey basis by a third-party implementation contractor, who negotiates load reduction agreements with multiple customers and “aggregates” these customers to provide UNSE a confirmed and guaranteed load reduction capacity available upon request while maintaining a degree of flexibility in how the curtailments are achieved. Since the demand response (“DR”) aggregator, EnerNOC, is obligated to provide the required megawatts of load curtailment, the process is similar to a power purchase agreement.

Recruitment is targeted to help ensure that customers invited to participate are able to provide reliable and significant load control reductions.

The responsibilities of EnerNOC will include, but not be limited to:

- recruitment of participants;
- participant assistance in designing effective load control strategies;
- provision of load control equipment and/or ensuring that participants successfully enable curtailment capability;
- participant tracking and reporting;
- establishing a head-end software system that can be used by UNSE to call and monitor load control events;
- call center services;
- customer satisfaction problem resolution; and
- negotiation and payment of incentives to customers for program participation.

UNSE staff will be responsible for the following:

- managing the contractor(s) and tracking program implementation;
- developing internal staff training and protocols for calling load control events; and
- public relations, program promotion, cross-program coordination of other demand-side management and renewable opportunities.

Cost Effectiveness. UNSE’s analysis indicates a benefit-cost ratio of 1.69. Staff’s methodology yields a lower benefit-cost ratio of 1.17, indicating cost-effectiveness.

Staff Recommendation. Staff recommends approving the C&I Direct Load Control Program be approved.

L. Commercial and Industrial (“C&I”) Facilities

Program Description. UNSE is requesting budget approval to continue this program and approval of these additional measures:

- Shade Screens
- Window Films
- Induction Lighting
- LED Channel Signs
- Outdoor CFL
- Reduced LPD
- T8 to Premium T8
- Premium T8 Lighting
- Beverage Controls
- Snack Controls (“vending miser”)
- Refrigerated Display
- Automatic Door Closers
- Refrigerated Display Gaskets
- Advanced Power Strips - Occupancy Sensors
- Advanced Power Strips - Timer Plug Strip
- Advanced Power Strips - Load Sensor

The C&I Facilities Program is an existing program, approved by the Commission in Decision No. 70524 (September 30, 2008). The Program offers incentives for a select group of retrofit and replace-on-burnout energy efficiency measures in existing facilities. Eligible customers include small and large commercial customers. The Program offers incentives for the installation of energy efficiency measures, including lighting equipment and controls, HVAC equipment, motors and motor drives, compressed air, and refrigeration measures. Incentives for new lighting measures range from \$2 to \$1,371, and refrigeration measures range from \$8 to \$40.

Program Objectives and Rationale. The C&I Facilities Program is designed to address certain barriers to this market segment, including limited investment capital, limited awareness of energy cost savings, and required short-term payback. The Program’s purpose is to persuade large business customers to install high-efficiency equipment at their facilities and encourage contractors to promote the Program and provide turn-key installation services to small business customers.

Budget. See UNSE EE Implementation Plan Budget Table herein which lists the sector, projected costs per category, and total budget for each program. The C&I Facilities Program shows total costs for 2011-12 of \$ 3,556,314 and total lifetime net benefits of \$5,134,805.

Delivery and Marketing Strategy. According to the UNSE application, the Program is operated as an "up-stream" market program, with incentives offered to prequalified contractors who can provide turn-key installation services for customers. The intention is to reduce the measure payback to one year or less. The Program also includes consumer and trade ally educational and promotional pieces designed to provide decision makers in the small business market with the information necessary to make informed choices (and increase awareness).

The marketing strategy includes educational seminars tailored to the small business market, major media advertising, website promotion, outreach and presentations at professional and community forums, and direct outreach to customers who meet the criteria for the Program.

Cost-Effectiveness. In order to evaluate the C&I Program at the project level, Staff analyzed a model commercial energy efficiency project that included delamping a portion of a typical 20,000 square foot commercial facility and replacing the remaining lighting fixtures with Premium T8 upgrades. In addition, the model project includes data for occupancy sensors, plug strips, and energy efficiency exit signage. By combining these particular measures, and using anticipated savings values for each measure, Staff determined that this "typical" commercial project would cost approximately, \$10,072 in incentives, while savings approximately 70,000 kWh and 37,000 kW.

Based on these anticipated costs and savings, Staff determined that the typical CI project would have a benefit-cost ratio of 1.38, indicating that the C&I Program would be cost-effective. Staff believes that this ratio is indicative of the benefits of similar projects that would be completed under the C&I Program.

Recommendation. Staff recommends approval that the C&I Facilities Program be approved for continuance, with the proposed new measures.

M. BEHAVIORAL COMPREHENSIVE

Program Description. The proposed Behavioral Comprehensive Program ("Behavioral Program") consists of five educational subprograms. The focus of the Behavioral Program is to educate Residential customers on how changes in behavior, including purchasing decisions, can improve energy efficiency. Most of the subprograms include low-cost measures, such as CFLs, faucet aerators, LED nightlights and refrigerator thermometers, in addition to the educational components.

The table below lists and describes the subprograms that make up the Behavioral Comprehensive Program. More detailed program descriptions are provided in the following paragraphs:

Subprogram	New (proposed) or existing	Descriptions
Home Energy Reports	New (proposed)	Comparison of energy use to that of neighbors. An on-line energy audit component will be moved into Home Energy Reports in 2012, from the E&O program.
Direct Canvassing	New (proposed)	Door to door awareness and direct install campaign
K-12 Education	New (proposed). Consists of redesigned energy education for 6 th , 7 th and 8 th grades, and will absorb the existing school-based energy education components from the Education and Outreach Program.	Classroom education including take home direct install kits
Community Education	New (proposed)	"Train the trainer" approach, with hands-on energy efficiency training
CFL Giveaway	New (proposed)	CFL bulb giveaway at outreach events

Home Energy Reports. Although budgeted separately, the Home Energy Reports subprogram is part of the overall Behavioral Comprehensive Program. The existing Home Energy Reports are designed to instigate behavioral changes in customers' energy consumption by (i) making customers aware of their energy consumption; and then (ii) allowing them to compare that usage to similarly situated homes. The subprogram targets habitual behaviors (e.g., lights and thermostats), purchasing behaviors (standard versus energy efficient appliances), and participation in demand-side management programs.

In addition, the on-line energy audit function that is currently part of the Education and Outreach (now Consumer Education and Outreach) Program will transition to the Home Energy Report subprogram during the first half of 2012.

Direct Canvassing. The direct canvassing initiative is a grass-roots, door-to-door approach to promoting energy efficiency, and is designed to reach neighborhoods difficult to reach through traditional messaging. The subprogram would use trained volunteers from local community organizations to talk to customers about energy efficiency. Two CFLs would be left with each customer, along with program materials for appropriate UNSE DSM programs.

K-12 Education. In addition to energy based class room curriculum, students would be instructed in energy saving approaches for their homes. Students in grades 6-8 would be provided with a take home kit which includes CFLs and refrigerator thermometers, as well as educational materials on how to reduce energy use.

Beginning in 2012, the K-12 subprogram will also offer the academic support activities currently offered under the Education and Outreach (“E&O”) Program, which will become the Consumer Education and Outreach (“CEO”) Program. The E&O Program’s school-based energy education activities will be transferred to the K-12 subprogram, to consolidate school-based energy education into one subprogram.

Community Education. The Community Education Program would engage community groups and work with public entities with “train the trainer” hands-on energy efficiency seminars. Community trainers would be given a broad based review of energy, efficiency and comfort principles. The seminars include hands-on training with a wide sample of materials such as weather stripping, low flow showerheads, caulk or foam sealant and CFLs.

CFL Giveaway. The Compact Fluorescent Light Give-Away Program will complement UNSE’s presence at community events, and its overall education and outreach efforts, and efficiency messaging. Free CFLs will be made available both at community events and to community organizations, including those involved in our Community Education Program.

Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Behavioral Comprehensive Program Overall Objectives and Rationale. The energy-related behaviors intended to be influenced by the Behavioral Comprehensive subprograms include the following:

- Habitual behaviors
 - Adjust thermostat setting
 - Turn off unnecessary lights

- Small purchasing and maintenance behaviors
 - Purchase and install faucet aerators and low flow shower heads
 - Purchase and install compact fluorescent lights
 - HVAC maintenance

- Larger purchasing decisions
 - Purchase an ENERGY STAR appliance
 - Purchase higher EE heating and cooling system through participation in a UNSE DSM Program

Delivery and Marketing Strategy. All UNSE residential customers would be eligible for this program. Delivery would be made through implementation contractors and UNSE resources.

Program Analysis/Issues. UNSE is proposing to reorganize its education programs in a way that mirrors the reorganization of the TEP programs.

The Company's current proposal is reasonable. Consolidation of school-based energy efficiency education within the K-12 subprogram is likely to improve efficiency, limit duplication of administration effort and expenditure, and reduce confusion between the proposed K-12 subprogram and the existing Education and Outreach Program.

Cost-Effectiveness. Cost-effectiveness for measures associated with the proposed new Behavioral Comprehensive subprograms are listed in the table below. For the K-12 Education and Community Education Program, cost-effectiveness of the associated measures was calculated based on the kits as a whole.

Subprogram	Measures	Benefit-cost Ratios
Home Energy Reports	Home Energy Reports	1.21
Direct Canvassing	CFLs	3.13
K-12 Education	CFLs, Faucet Aerator, LED nightlight, Refrigerator thermometer	2.95
Community Education	CFLs, Showerhead, Faucet Aerator, LED nightlight, Refrigerator thermometer	2.81
CFL Giveaway	CFLs (23 Watt)	2.24
CFL Giveaway	CFLs (18 Watt)	3.07

Staff Recommendations.

- Staff recommends that the Behavioral Comprehensive program, and all its subprograms, be approved.

N. Residential Energy Efficiency Financing

Program Description. UNSE was ordered to file a proposal for an energy efficiency financing program in Decision No. 72024 (December 10, 2010). UNSE is requesting approval for a new Residential Energy Efficiency Financing pilot program to provide customers with the capital needed to make cost-effective energy efficiency upgrades to their homes. UNSE believes that a two-year pilot program would allow sufficient time for the Company to evaluate the Program, including participation, default rates, and overall value to customers.

The Program will offer energy efficiency loans to UNSE customers who are seeking financing for the energy efficiency improvements to their homes. Actual amounts will vary by loan size and terms. Loan proceeds can be used for energy efficiency measures that have been approved by the Commission.

UNSE evaluated the funding levels and cost to the customer, as shown in Table 1-1 below. UNSE assumed an average loan size of \$4,818 and a maximum term of 10 years in these calculations.

Funding levels and costs to customers are shown in the table below.

	<u>Year 1</u>	<u>Year 2</u>
Loan Amount Available	\$100,000	\$1,000,000
Number of Loans	21	208
Reserve	\$10,000	\$100,000
Buy Down	\$4,006	\$40,059
Total Budget	\$85,968	\$278,104

UNSE's proposed Program elements include:

- Loan commitment of \$1,000,000 per year for two years; this will provide approximately 208 loans based on an average \$4,818 loan amount;
- Loans available only on energy efficiency measures meeting the Commission-required cost effectiveness test;
- Low interest rates provided by a combination of an interest rate buy-down and a 10% loan loss reserve account;
- Limited customer exposure to default risk (10% of the loan commitment);
- Funding provided through an approved demand-side management ("DSM") surcharge charged to residential customers;
- Affordable residential financing for energy efficiency measures;
- Convenient customer access to and repayment of the financing;

- Standard finance product offering for all eligible, approved borrowers;
- Leveraged financing;
- Accurate Truth-in-Lending notifications and billing to customers provided by an experienced third party lender; and
- Community involvement in forming and marketing the Program.

Funding. UNSE has proposed an increase in the DSM Surcharge of \$0.0003 per kWh to fund the Program. The average annual cost to each residential customer would be \$3.08. UNS proposes that the DSM Surcharge necessary to fund this program be collected only from residential customers, as the loan instruments described are restricted to residential customers. Staff recommends against the Company's request to charge Residential customers separately for this individual program.

Program Objectives and Rationale. The Program is designed to provide an equitable and comprehensive approach to the financing of energy efficiency improvements in existing homes. UNSE believes that the Program's financing options to help cover the costs of energy efficiency measures will improve customer participation in energy efficiency programs and expand the pool of customers that can afford to participate in those programs. Although other vendors offer financing for their own individual products, the Program's comprehensive approach to home energy upgrades cuts across several potential products and includes efficiency measures not traditionally financed, such as air and duct sealing.

UNSE states that it has three primary objectives with respect to providing a financing option:

- 1) The program design must eliminate the utility from any Truth-in-Lending Law regulation implications;
- 2) The program must provide a reasonable amount of funds at a reasonable interest rate and with a low initial investment; and
- 3) Energy efficiency measures that qualify for UNSE financing must have met the Commission's cost-effectiveness test.

Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Target Market. The target market for this Program is any residential customer in UNSE's service territory who own their home. Financing is available for installation of approved and cost effective DSM energy efficiency measures.

Program Eligibility. Eligible properties include single-family (1 to 4 unit), owner-occupied homes.

Additional Background. UNSE originally proposed using the Pennsylvania Treasury as the third party lender. Interested parties had recommended making further effort to secure third-party lenders located in Arizona. After the request to further investigate alternative Arizona-based lenders for the similar Tucson Electric Power Company and after experiencing contract issues with the prior lender for the UNS Gas program, suitable loan programs for all three companies were negotiated with a local credit union. UNSE has now chosen Vantage West "VW"), a local Credit Union, as the third-party lender with loans leveraged by a loss reserve account as well as the possibility of a combination of a 10 percent loan loss reserve account and an interest rate buy-down, all funded from the DSM Surcharge. The interest rate buy-down would bring the rate from VW's normal 11.99 percent down to 7.99 percent.

UNS Gas, Inc. ("UNS Gas") (an affiliate of UNSE), requested a program nearly identical to the one requested herein. The UNS Gas program was approved in ACC Decision No. 72062 (January 6, 2011).

Issues. In Decision No. 72024 the Company was ordered to work with interested community groups in the UNSE service territory in crafting its proposal for a financing program and to report on its work with such groups in its filing. Although the filing provided detailed information on development of the program, specific information on the Company's work with interested community groups was not included. However, in communication with Staff, the Company confirmed that, while crafting its Residential Financing proposal UNSE met with and received input from: (i) Mohave County Developmental Services; (ii) the Mohave Contractors Association; (iii) the Kingman Chamber of Commerce; and (iv) the City of Kingman Council Members.

In addition, as required by Decision No. 72024, UNSE corresponded with the State Energy Office to investigate the possibility of partnering with a bank in addressing how the financing program would be initiated. The Energy Office indicated they would not be able to participate or partner in financing programs at this time.

Cost Effectiveness. This program is a financing program supporting other program measures. There are no energy efficiency measures under this program. The financing program would allow customers to install measures included in the UNSE Energy Efficiency Implementation Plan. Therefore, there is no need for a benefit/cost test for this program and Staff has not performed such analysis for the Residential Energy Financing pilot program. The efficiency measures are parts of other programs and analyzed separately there.

Staff Recommendations

- Staff recommends approval of the Residential Energy Efficiency Financing Program with a two-year pilot as described herein.
- Staff recommends that the Commission not approve UNSE's request that the DSM Surcharge for the Residential Energy Financing Program be collected only from Residential customers.

Measurement, Evaluation, and Research. Measurement, Evaluation, Research shall be in accordance with the Electric Energy Efficiency Rules, Section R14-2-2415, including the following database activities:

- As part of Program operation, UNSE would request the Lender to provide the necessary data elements to populate the tracking database and provide periodic reporting and data collection.
- UNSE would establish systems to collect the data needed to support effective Program management, transfer of funds from UNSE to the loan loss reserve accounts, reporting, and evaluation.

O. ENERGY CODES ENHANCEMENT PROGRAM

Program Description. Improved building energy codes are recognized as a simple and cost-effective means of achieving energy savings over the lifetime of new construction and newly renovated buildings. The UNSE Energy Codes Enhancement Program ("ECEP") seeks to overcome barriers to the adoption of improved building codes.

Budget. See the UNSE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

Program Objectives and Rationale. The objective of the UNSE ECEP is to increase energy savings in new construction and renovated buildings, in both the Residential and Commercial sectors, by improving compliance with existing building energy codes and supporting updates to building codes.

Delivery and Marketing Strategy. The ECEP would target building committees and city councils, as well as building design officials including architects, engineers, contractors and builders. UNSE Program staff would collaborate with regional and national organizations that track market trends and can offer guidance on best practices for energy code adoption and enforcement.

Program support to the target audience may include activities such as:

- Classroom, field and “brown bag” training sessions;
- Purchasing energy code books for officials that currently lack such resources;
- Supporting energy code-related certifications for code officials;
- Conducting energy code compliance assessments by 2017 to fulfill American Recovery and Reinvestment Act (“ARRA”) requirements to demonstrate 90% energy code compliance (may be done in coordination with energy efficiency program Measurement, Evaluation and Research (“MER”) activities); and
- Collaboration with the Southwest Energy Efficiency Project and other regional groups to support research on and adoption of building codes and equipment standards.

UNSE staff would be responsible for administering the Program. Responsibilities for these staff would include planning, coordination and implementation of all Program activities.

Program marketing would be accomplished through direct outreach to municipal officials, participation in building code enhancement committees, cross-marketing with other UNSE energy efficiency programs and through UNSE websites.

Program Analysis/Issues. According to the U.S. Department of Energy², buildings use 39 percent of our total energy, two-thirds of our electricity, and one-eighth of our water. In light of the increasing cost of energy, building energy efficiency is a key component of sound public policy. One reason is that the benefits of more efficient construction often continue for the life of the structure, often 30 to 50 years.

DOE research³ shows that contemporary energy codes could save about 330 Trillion BTU by 2030, almost 2 percent of total current residential energy consumption. There would also be comparable savings in consumer energy bills, air pollution and greenhouse gas emissions. As is discussed below, however, Arizona is a “home rule” state with no mandatory state-wide energy efficiency building code.

Although many counties and cities within the state have adopted an EE building code, some municipalities lack the resources and knowledge to effectively enforce existing building codes or implement an energy efficiency-specific code. Many municipal code officials lack the resources to stay current on market trends relevant to building codes, especially given current economic conditions. In jurisdictions that currently lack any type of building code, public

² U.S. Department of Energy website: http://www.energycodes.gov/why_codes/

³ *Ibid.*

officials could benefit from information and assistance in developing and advocating the adoption of a building code.

In addition to the lack of information and resources impacting the development and enforcement of building codes at the governmental level, building design and construction professionals could likely benefit from additional education and training on code requirements.

The primary market barriers to achieving maximum energy efficiency from building related codes are as follows:

- Lack of knowledge and resources to facilitate compliance with existing codes,
- Inconsistency in codes across the state, and
- Lack of resources to advocate for adoption of new codes.

Cost-Effectiveness. UNSE has not provided an estimate of energy savings from implementation of the Energy Codes Enhancement Program. Rather, development of tracking metrics and deemed savings methodologies form an integral part of the Program. Energy savings from the Program would be determined upon completion of the Measurement, Evaluation and Research phase of the Program.

Staff Recommendations. Advocacy of energy codes is an appropriate component of UNSE's 2012 Energy Efficiency Implementation Plan, given the high potential for long-term energy savings. Therefore, Staff recommends approval of UNSE's Energy Codes Enhancement Program, subject to implementation of the MER and Reporting protocols stated herein.

P. Education and Outreach/Consumer Education and Outreach

Program Description. The Education and Outreach ("E&O") Program is an existing program. UNSE is requesting budget approval to continue this program, which is being modified through the transfer of its school-based energy education components and its on-line audit function to subprograms of the Behavioral Comprehensive Program.

The revised Program would be responsible for marketing of the UNSE portfolio as a whole. It would also be responsible for general consumer education. In order to reflect this change in focus, UNSE is proposing to change the name the E&O Program to the Consumer Education and Outreach ("CEO") Program.

With the school-based energy education activities and measures and the on-line audit function moved into the Behavioral Comprehensive Program, the CEO Program would market UNSE's energy efficiency and renewable programs⁴, including Time of Use ("TOU") rates:

⁴ Marketing materials for UNSE energy efficiency programs include information concerning UNSE's renewable programs, providing an added benefit from the funding used to market energy efficiency.

- Develop brochures and communication materials that showcase all available EE and Renewable Programs,
- Develop and maintain communication materials related to general energy saving information,
- Provide labor and materials to staff trade shows and community events,
- Develop and maintain web content to educate consumers on energy use and TOU rate choices, and
- Cross communication of EE Programs and general energy saving information.

Program Objectives and Rationale. The E&O Program is intended to increase participation in the Company's other DSM/EE programs and to promote conservation by customers.

Cost-effectiveness. The CEO Program would market the UNSE portfolio, promote conservation generally and educates customers. It does not produce direct savings , but would promote participation in cost-effective programs and measures.

Staff.

- Staff recommends that the Education and Outreach (or Consumer Education and Outreach) Program be approved for continuation, with the modifications proposed.

Q. Program Development, Analysis And Reporting Software ("Program Development")

Description. This budget item provides program support and covers costs relating to the Implementation Plan as a whole, including program design, database design and development, and technical support. Included in this budget item are the resources necessary for meeting reporting requirements under the Electric Energy Efficiency Rates.

Objectives and Rationale. Program Development includes:

- Incremental cost studies,
- Measure and program research and benefit-cost analysis,
- Codes and Standards research and analysis,
- Education and training on new technologies,

- Program design, development and analysis, and
- Software for tracking and reporting to remain in compliance with the Electric Energy Efficiency Rules.

Cost-Effectiveness. Program Development costs are associated with administering the Implementation Plan as a whole. These costs are not attributable to one energy efficiency program or measure, but are required to facilitate the energy efficiency goals for all programs and measures. Cost-effectiveness, as such, can not be assessed for this budget item, but the Program Development costs should represent a limited portion of the total budget.

Projected Program Development costs would equal approximately 3.1% percent of the total budget proposed for 2012. In comparison, incentives represent, respectively, approximately 48% of the 2012 budget.

Staff Recommendation. Staff recommends that the budget amounts allocated to program development, analysis and reporting software costs be included in the budget as shown in the application.

U. MEASUREMENT, EVALUATION AND RESEARCH; REPORTING: ALL PROGRAMS

Measurement, Evaluation, and Research. At a minimum, Measurement, Evaluation, and Research ("MER") shall be done in accordance with the Electric Energy Efficiency Rules, Section R14-2-2415.

Reporting. At a minimum, Reporting shall be done in accordance with the Electric Energy Efficiency Rules, Section R14-2-2409.

R. BUDGET FLEXIBILITY

UNSE has requested the ability to shift up to 25 percent of its approved funds from Residential to Commercial sector programs, or from Commercial to Residential sector programs, based on program activity. The Company has also requested that it be allowed to increase the total budget for the energy efficiency programs by up to 25 percent, where cost-effective. The Company states that this type of flexibility maximizes participation in successful programs and allows it to continue accepting applications from customers in cases where an individual program may be over-subscribed.

Shifting of Funds. While the Commission has allowed utilities to shift energy efficiency program funding among programs or measures within the Residential sector, or among program or measures within the Commercial sector, recent practice has been to limit shifting from sector to sector, to ensure that both Residential and Commercial customers have reasonable opportunity to participate in energy efficiency programs. Allowing funding shifts among programs or

measures within a sector allows a reasonable degree of flexibility, but ensures reasonable access to participation in energy efficiency programs for both Residential and Commercial customers.

Increase to Total Budget. With a projected budget for 2012 of \$5.5 million, the up to 25 percent flexibility proposed by UNSE could result in an increase of over \$1.36 million, depending on customer participation and actual costs. Although actual spending may be either over or under the level projected for the Implementation Plan, and the Company should be allowed some flexibility to accommodate unanticipated levels of customer participation, the 25 percent level proposed by UNSE is excessive. Allowing an increase of up to 5 percent would provide UNSE with flexibility in responding to higher-than-anticipated customer participation, but would better limit potential costs.

Staff Recommendations

- Staff recommends that the Company be allowed to shift funding from measure to measure, or from less active to more active programs, for up to 25% of the budget originally allocated to the less active program. Budget shifting may only be done within, and not between, the Residential and Non-Residential program sectors.
- Staff recommends that the Company be allowed to increase the overall Implementation Plan budget by up to 5 percent, if the increases are allocated to Commission-approved cost-effective measures and programs.

S. DEMAND-SIDE MANAGEMENT SURCHARGE (“DSMS”)

UNSE is requesting an updated DSMS consisting of an under-collection of approximately \$398,000, a 2012 projected Implementation Plan expense of \$5.7 million and a Performance Incentive of approximately \$2.23 million, resulting in a DSMS of \$0.005381 per kWh. Staff is recommending a Performance Incentive of approximately \$687,000 for 2011 and 2012 combined, based on the method of calculation currently used by TEP. (The TEP performance incentive is based on 10% of the net benefits from the DSM portfolio, excluding the LIW, E&O and Direct Load Control Programs, with a cap based on 10 percent of DSM spending.) Based on the current under-collection and the proposed budget, this would result in a DSMS of \$0.004382 per kWh. The final DSMS should be adjusted to reflect any changes ordered by the Commission.

DSM program costs. The DSMS should include recovery for the projected cost of the UNSE’s Implementation Plan, and should reflect any actions taken by the Commission with respect to the Implementation Plan.

DSM Performance Incentive. The EE Rules state that “an affected utility may propose for Commission review a performance incentive to assist in achieving the energy efficiency standard. . . .” (R14-2-2411) (The EE Rules do not provide for revision of an existing

performance incentive, as is the case with TEP.) UNSE has proposed a Performance Incentive based on the modified methodology proposed to TEP, resulting in a Performance Incentive of \$2.23 million. Staff recommends that UNSE have a performance incentive calculated using the same methodology *currently* being used for TEP, resulting in a Performance Incentive of approximately \$687,000.

DSMS Reset Level. The current DSMS is \$0.000995 per kWh. UNSE has requested to increase the DSMS to \$0.005381 per kWh, based on the currently anticipated collection period. Based on the analysis indicated above, Staff recommends a DSMS of \$0.004382 per kWh. The impacts, based on average Residential usage, are shown in the table below:

Residential Usage	kWh/month	Current DSMS/kWh	Current Bill Impact/month	UNSE Proposed DSMS/kWh	UNSE Proposed DSMS Impact/month	Staff Proposed DSMS/kWh	Staff Proposed DSMS Impact/month
Summer Average	980	\$0.000995	\$0.98	\$0.005381	\$5.27	\$0.004382	\$4.29
Winter Average	700	\$0.000995	\$0.70	\$0.005381	\$3.77	\$0.004382	\$3.07
Annual Average	840	\$0.000995	\$0.84	\$0.005381	\$4.52	\$0.004382	\$3.68

Recommendations. Recommendations regarding the DSMS are listed below:

- Staff recommends that the DSMS include: (i) the program spending approved by the Commission in this Decision; and (ii) the Performance Incentive, as calculated herein.
- Staff also recommends that calculation of the DSMS take into account the current DSM balance.
- Staff recommends that the DSMS be reset to \$0.004382 per kWh.

Adjustor Reset and Reporting Requirements. The Company requested that the current April 1 surcharge filing requirement and semi-annual DSM reporting (March 1 and September 1) requirements be superseded by the reporting requirements of A.A.C. R14-2-2409. UNSE plans to file for an adjustor rate reset annually, as part of its Implementation Plan filings, beginning in June 2012, with the actual reset to take effect in January 2012.

- Staff recommends that the current surcharge filing and DSM reporting requirement be superseded by the reporting requirements of A.A.C. R14-2-2409.

- Staff also recommends that, in any year during which the Company does not file an Implementation Plan, or does not address the DSM adjuster reset within its Implementation Plan, an adjuster reset application should be filed separately, no later than April 1.

T. CALCULATING COST-EFFECTIVENESS

Staff recommends that, in all future DSM Implementation Plans, the Company use the same input values and methodology as Staff for calculating the present value benefits and costs to determine benefit-cost ratios.

U. SUMMARY OF RECOMMENDATIONS

Staff has made the following recommendations:

Overall

- In cases where a measure is not approved, the funding associated with that measure should be used to fund cost-effective measures within the same program, if possible.
- The Company should have the flexibility to transfer funding among cost-effective measures, within each program, to accommodate varying participation levels.
- The Company should have the flexibility to move up to 25% of funding from program to program within each sector, to accommodate varying participation levels. However, funding may not be transferred out of the Low-Income Weatherization Program.
- The Company should track federal standards, including those for lighting, to ensure that measures promoted by the UNSE Implementation Plan offer cost-effective savings over and above current baselines.
- Staff acknowledges that achieving the 2011 and 2012 standards may be difficult because of the timing of the approval of the Implementation Plan. Therefore, a waiver should be granted for 2011 and 2012 but the cumulative standard to achieve by 2020 not be waived at this time.
- that, going forward, savings be enhanced through an increased focus on the approved measures or programs producing the most savings per dollar spent, while still allowing both Residential and Non-residential sectors reasonable and equitable access to Implementation Plan programs.

Appliance Recycling

- The UNSE Appliance Recycling Program should be approved and it should include both the refrigerator and freezer measures.
- The Company should offer a \$30 incentive, rather than the \$35 incentive proposed, but the overall budget for incentives should not be decreased.

Multi-Family Housing Efficiency

- The proposed Multi-Family Program should be approved, with older, less efficient and low-income complexes as a primary focus for the Multi-Family Program's activities.

Efficient Products

- The Efficient Products Program should be approved and continue to offer CFLs, with the addition of the Variable Speed Pool Pump, Advanced Power Strip and Pool Pump Timer measures.
- The Residential LED Light measure should not be approved at this time.
- The lifespan of CFL measures should be re-evaluated for the Company's next Implementation Plan, and any changes to these assumptions should be incorporated into cost-effectiveness and savings calculations for the Efficient Products Program.

Low-Income Weatherization

- The Low-Income Weatherization Program should be approved for continuation as part of UNSE's Implementation Plan.
- UNSE should be allowed to tie the eligibility level for the UNSE LIW Program to the eligibility level set for the federal Low-Income Home Energy Program ("LIHEAP"), so that the eligibility levels remain consistent over time.

Residential New Construction

- that UNSE RNC Program should be approved for continuance pending action on the Company's filing forty-two month filing, as referenced in Decision No. 71641.

Existing Homes and Audit Direct Install

- The Existing Homes and Audit Direct Install Program should be approved for continuance.

Shade Tree

- The Shade Tree Program should be approved for continuance.

Bid for Efficiency

- The UNSE Bid for Efficiency Pilot Program should be approved as a two-year pilot program as discussed herein.
- Individual project incentives under this program should be capped at 60 percent of the incremental costs of the efficiency measures included in the project.

Retro-Commissioning

- The UNSE Retro-commissioning Program should be approved.

Schools Facilities

- The School Facilities Schools Program should be approved.

C&I Facilities

- that the C&I Facilities Program be approved for continuance, with the proposed new measures.

Behavioral Comprehensive

- The Behavioral Comprehensive program, and all its subprograms, should be approved.

Residential Energy Financing

- The Residential Energy Efficiency Financing Program should be approved for a two-year pilot as described herein.

- UNSE's request that the DSM Surcharge for the Residential Energy Financing Program be collected only from Residential customers should not be approved.

Energy Codes Enhancement

- UNSE's Energy Codes Enhancement Program should be approved, subject to implementation of the MER and Reporting protocols stated herein.

Education and Outreach

- The Education and Outreach (or Consumer Education and Outreach) Program should be approved for continuation, with the modifications proposed.

Program Development

- The budget amounts allocated to program development, analysis and reporting software costs should be included in the budget be approved, as shown in the application.

Budget Flexibility

- The Company should be allowed to shift funding from measure to measure, or from less active to more active programs, for up to 25 percent of the budget originally allocated to the less active program. Budget shifting should only be done within, and not between, the Residential and Non-Residential program sectors.
- The Company should be allowed to increase the overall Implementation Plan budget by up to 5 percent, if the increases are allocated to cost-effective measures and programs.

DSMS

- The DSMS should include: (i) the program spending approved in this Decision; and (ii) the Performance Incentive, as calculated in the manner set in the last rate case.
- Calculation of the DSMS should take into account the current DSM balance.

Staff acknowledges that achieving the 2011 and 2012 standards may be difficult because of the timing of the approval of the Implementation Plan. Therefore, a waiver should be granted for 2011 and 2012 but the cumulative standard to achieve by 2020 not be waived at this time.

- The DSMS should be reset to \$0.004382 per kWh.

Adjustor Reset and Reporting Requirements

- The current surcharge filing and DSM reporting requirement should be superseded by the reporting requirements of A.A.C. R14-2-2409.
- In any year during which the Company does not file an Implementation Plan, or does not address the DSM adjustor reset within its Implementation Plan, an adjustor reset application should be filed separately, no later than April 1.

Calculating Cost-Effectiveness

- Staff recommends that, in all future DSM Implementation Plans, the Company use the same input values and methodology as Staff for calculating the present value benefits and costs to determine benefit-cost ratios.



for Steven M. Olea
Director
Utilities Division

SMO:JMK:tdp\CHH

ORIGINATOR: Julie McNeely-Kirwan, Richard Lloyd and Jeff Pasquinelli

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BEFORE THE ARIZONA CORPORATION COMMISSION

GARY PIERCE
Chairman
BOB STUMP
Commissioner
SANDRA D. KENNEDY
Commissioner
PAUL NEWMAN
Commissioner
BRENDA BURNS
Commissioner

IN THE MATTER OF THE APPLICATION)
OF UNS ELECTRIC, INC. FOR APPROVAL)
OF ITS 2011-2012 ENERGY EFFICIENCY)
IMPLEMENTATION PLAN)
_____)

DOCKET NO. E-04204A-11-0056
DECISION NO. _____
ORDER

Open Meeting
January 10 and 11, 2012
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. UNS Electric, Inc. ("UNSE" or "the Company") provides electric service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission ("Commission").

2. UNSE provides service in the counties of Santa Cruz and Mohave. The Company has approximately 91,000 customers, 80,000 of whom are Residential and 10,000 of whom are Commercial. There are also a smaller number of Industrial, Mining, Public Street and Highway Lighting, and Resale customers.

Implementation Filing

3. On January 31, 2011, UNSE filed its application for approval of the Company's Energy Efficiency Implementation Plan for 2011-2012 ("Implementation Plan"). On September 1, 2011, the Company filed updated information concerning several elements of the original filing, including the Residential Financing Program, the budgets, Implementation Plan savings, and the Demand-side Management ("DSM") Adjustor.

1 4. The Implementation Plan and updated filing address the following issues and
2 Company proposals:

- 3 i. *UNSE Portfolio of Programs for 2011-2012.* The existing and proposed DSM
4 programs and measures proposed for the Company’s DSM through the 2012
5 program year;
- 6 ii. *DSM Performance Incentive.* UNSE does not currently have a performance
7 incentive. The Company is proposing a performance incentive of \$2.23 million
8 for two years, on a pre-tax basis, similar to the modified performance incentive
9 proposed for TEP in its Implementation Plan; and
- 10 iii. *Proposed Demand-Side Management (“DSM”) Surcharge (“DSMS”).* The
11 proposed DSMS is the rate, per kWh, at which the Company would recover its
12 proposed DSM costs and DSM Performance Incentive.

11 Scope and Structure of Program Review

12 5. Existing and Proposed Programs. The UNSE Implementation Plan is organized
13 into four parts: (i) Residential; (ii) Commercial; (iii) Behavioral; and (iv) Support. For purposes
14 of review, each sector has been addressed in the above order: New (Proposed), Existing (with
15 modifications proposed) programs, and Existing (without modifications proposed). The programs
16 have been reviewed in the order indicated by Program Description Tables 1-4, herein.

17 6. Summarized descriptions are provided for existing programs. The focus of Staff’s
18 review and analysis was new programs, proposed changes to existing programs and new
19 Implementation Plan components or enhancements, and the methodology for calculating the
20 DSMS. Measures previously determined by Staff to be cost-effective were re-evaluated for cost-
21 effectiveness if current information indicated that re-evaluation was necessary. Information from
22 the August 2011 update has been incorporated into this review.

23 7. UNSE Implementation Plan. The tables below list programs by sector, and indicate
24 whether each program is new (proposed) or existing (with or without proposed modifications). A
25 brief description is also provided. More detailed program descriptions are presented herein, in the
26 order indicated in the following tables.

27 ...
28 ...

PROGRAM DESCRIPTION – TABLE 1 (Residential)

RESIDENTIAL SECTOR		
Program Name	New (Proposed), Existing with modifications proposed or Existing without modifications proposed	Description
Appliance Recycling	New (Proposed)	Removes and recycles inefficient refrigerators and freezers.
Multi-Family	New (Proposed)	Promotes direct install of energy efficient measures at apartment complexes consisting of more than four apartments.
Efficient Products (formerly the CFL Buy-Down Program)	Existing, with additional measures proposed	Program currently promotes CFLs. The Company has proposed including advanced power strips, and energy-efficient pool pumps and timers.
Low Income Weatherization	Existing, with expanded eligibility proposed (eligibility to track with that of federal LIHEAP Program)	Assists in making low-income homes more energy efficient.
Residential New Construction	Existing, no modifications proposed	Promotes the building of more efficient new homes.
Existing Homes and Audit Direct Install (formerly the Residential HVAC Program)	Existing, no modifications proposed	Promotes energy efficiency in existing homes.
Shade Tree	Existing, no modifications proposed	Promotes planting of desert-adapted shade trees in locations designed to enhance energy efficiency.

PROGRAM DESCRIPTION – TABLE 2 (Commercial)

COMMERCIAL SECTOR		
Program Name	New (Proposed) or Existing	Description
Bid for Efficiency – Pilot	New (Proposed)	Customers or project sponsors develop a holistic EE project then bid competitively for incentives within broad program guidelines.
Retro-Commissioning	New (Proposed)	Involves using a systematic approach to identifying building equipment or processes that are not achieving optimal performance or results in an existing facility.
Schools Facilities	New (Proposed)	A program similar to the UNSE C&I Facilities Program, but with a separate budget specifically for school facilities.
C&I Demand Response	New (Proposed)	A third-party implementation contractor negotiates load reduction agreements with multiple customers and “aggregates” these customers to provide UNSE with a guaranteed load reduction upon request.
C&I Facilities	Existing, with new measures proposed	Persuade business customers to install high-efficiency equipment at their facilities and encourage contractors to promote the Program.

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PROGRAM DESCRIPTION – TABLE 3 (Behavioral)

Behavioral Sector		
Program Name	New (Proposed) or Existing	Description
Behavioral Comprehensive	New (Proposed) and Existing Components	A variety of educational/behavioral programs, including direct canvassing, K-12 education (moving from Education and Outreach, now Consumer Education and Outreach), community education and CFL giveaway outreach events.
Home Energy Reports	New (Proposed)	Energy reports comparing a customer's usage to that of their neighbors. Reviewed herein as part of the Behavioral Comprehensive Program. Will absorb the on-line audit tool function from the existing Education and Outreach (now Consumer Education and Outreach) Program.

PROGRAM DESCRIPTION – TABLE 4 (Support)

Support Sector		
Program Name	New (Proposed) or Existing	Description
Residential Energy Financing	New (Proposed)	Low-interest unsecured loans for energy efficiency measures installed in existing homes
Energy Codes Enhancement Program	New (Proposed)	Seeks to improve the level of compliance with existing local building energy codes and supports the periodic updating of these codes.
Consumer Education and Outreach	Existing. On-line Energy Audits and Academic Education components transferred to Behavioral Comprehensive sector programs.	Consumer education designed to increase participation in the UNSE Implementation Plan and promote changes in behavior.
Support and Program Development	Existing, tracks with portfolio program requirements	Costs for program design, development and resources necessary to meet reporting requirements of the EE Standard

BUDGETS: 2011 and 2012

8. The approved 2010 energy efficiency program budget total approximately \$2.1 million. Below are the proposed budgets for the UNSE Implementation Plan, by sector, program and category for 2011 and 2012. Although the budgets for two years are included herein, the programs will not conclude at the end of those two years but, instead, will continue until further Commission action. The Implementation Plan budgets were updated in September 2011, in the Notice of Filing Updated Information In Support of [the] 2011-2012 Electric Energy Efficiency Implementation Plan. The tables below reflect the updated budgets.

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	Shade Tree	\$14,000	\$19,232	\$1,662	\$3,003	\$1,516	\$39,412
	Low-Income Weatherization	\$324,000	\$11,215	\$3,352	\$3,003	\$10,247	\$351,817
	Multi-Family	\$14,725	\$37,958	\$5,268	\$3,003	\$2,438	\$63,393
	Subtotal	\$1,295,743	\$990,670	\$280,366	\$28,528	\$84,482	\$2,679,788
Commercial	C&I Facilities	\$330,472	\$318,013	\$64,848	\$14,264	\$29,104	\$756,700
	Bid for Efficiency (Pilot)	\$240,000	\$27,943	\$40,191	\$3,003	\$12,445	\$323,583
	Retro-Commissioning	\$198,000	\$13,730	\$31,759	\$3,003	\$9,860	\$256,352
	C&I Demand Response	\$392,700	\$321,300	\$0	\$87,138	\$20,000	\$821,138
	Schools Facilities	\$154,222	\$23,404	\$9,414	\$3,003	\$7,602	\$197,645
	Subtotal	\$922,694	\$383,089	\$146,214	\$23,273	\$59,011	\$2,355,418
Behavior	Home Energy Reports	\$192,450	\$22,819	\$10,763	\$7,507	\$9,342	\$242,881
	Behavioral Comprehensive	\$174,066	\$155,935	\$25,000	\$3,003	\$14,320	\$372,324
	Subtotal	\$366,516	\$178,753	\$35,763	\$10,510	\$23,662	\$615,205
Support	Consumer Education and Outreach	\$0	\$132,500	\$4,500	\$2,102	\$2,782	\$141,884
	Residential Energy Financing	\$40,059	\$194,431	\$34,314	\$3,003	\$6,297	\$278,104
	Codes Support	\$0	\$23,044	\$3,457	\$1,652	\$1,126	\$29,278
	Program Development, Analysis and Reporting Software	\$0	\$170,980	\$0	\$0	\$0	\$170,980
	Subtotal	\$40,059	\$520,954	\$42,271	\$6,757	\$10,205	\$620,245
	TOTAL	\$2,625,012	\$2,073,466	\$504,614	\$69,067	\$177,360	\$6,270,657
Percentage of Total Budget		42%	33%	8%	1%	3%	100%

SAVINGS: 2011 AND 2012

9. UNSE reports that the Company does not anticipate meeting the EE standards for 2011 and 2012. In its filing of updated information on September 1, 2011, in support of the 2011-2012 Implementation Plan, UNSE requested a waiver and modification of the EE standards. The following table shows UNSE's projected savings by year. The projections for 2012 have been modified by Staff to reflect the likely range of potential savings for 2012.

Year	Retail Energy Sales (MWh)	Projected Incremental Annual Energy Savings (MWh)	Projected Cumulative Annual Energy Savings (MWh)	Cumulative Annual Savings as a % of previous year Retail Sales	Cumulative EE Standard
2010	1,857,160				
2011	1,911,820	14,067	14,067	0.76%	1.25%
2012		25,065-30,077	39,132-41,144	2.05-2.31%	3.00%

Low Income Weatherization	Up to \$3,000. Funding is paid to weatherization agencies once weatherization work is documented.
Residential New Construction	Tier 1=\$400 per home Tier 2=\$1,500 per home Tier 3=\$3,000 per home
Existing Homes and Audit Direct Install (formerly the Residential HVAC Program)	\$250 to \$1,700 per measure
Shade Tree	\$15 coupon/credit on electric bill.

INCENTIVE SUMMARY TABLE 2 (Commercial)

Commercial Sector	
Program Name	
Bid for Efficiency – Pilot	Varies. Up to 60% of incremental cost.
Retro-Commissioning	\$22,000 average per 100,000 square foot.
Schools Facilities	Varies. Depending on measure, up to \$6,535 for custom measures
C&I Demand Response	Varies. Third party contractor negotiates load reduction agreements, including incentives, with multiple customers.
C&I Facilities	\$2-\$150 per unit or measure \$1,371 per building for Reduced Lighting Power Density measure

INCENTIVE SUMMARY TABLE 3 (Behavioral)

Behavioral Sector	
Program Name	
Behavioral Comprehensive	CFLs and other lower-cost measures provided. No financial incentives.
Home Energy Reports	Not applicable.

INCENTIVE SUMMARY TABLE 4 (Support)

Support Sector	
Program Name	
Residential Energy Financing	Loan program.
Energy Codes Enhancement Program	Not applicable.

RESIDENTIAL PROGRAMS

A. APPLIANCE RECYCLING

13. Program Description. UNSE's proposed new Appliance Recycling Program ("Appliance Program") is designed to remove and recycle inefficient working refrigerators and freezers. UNSE cites national studies indicating that approximately 20% of customers have at least one secondary inefficient refrigerator or freezer in their home, suggesting a significant potential for energy savings in this sector. The goal is to recycle 1,035 refrigerators and 115 freezers per year.

1 The Appliance Program would offer residential customers a \$35 incentive, plus free pick-up and
2 recycling for working, but inefficient, refrigerators and freezers.

3 15. The Appliance Recycling Program permanently removes inefficient appliances that
4 might otherwise remain in service, either at the customer's home, or elsewhere through donation or
5 resale. In addition, the recycling program removes the usual barriers to taking these appliances
6 offline by eliminating both the cost and the inconvenience associated with disposing of inefficient
7 appliances.

8 16. Program Objectives and Rationale. Second refrigerators and freezers are usually
9 older models and are often less efficient and more costly to operate than up-to-date efficiency
10 appliances. UNSE estimates an average monthly dollar savings for its customers of \$8.96 for
11 refrigerators and \$6.92 for freezers for its customers. Savings can go higher. The Energy Star site
12 notes that, while replacing a refrigerator from the 1980s can save over \$100 per year, replacing a
13 refrigerator from the 1970s can save more than \$200 per year.

14 17. Eligibility. The Program is open to UNSE residential customers with operable
15 inefficient refrigerators or freezers of between 10 and 30 cubic feet in size. Households are limited
16 to two recycling rebates per year.

17 18. Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the
18 sector, projected costs per category, and total budget for each program.

19 19. Delivery and Marketing Strategy. The Appliance Program would utilize an
20 experienced appliance recycling contractor, JACO, to: (i) market the program; (ii) verify
21 customer's eligibility; (iii) process incentives; (iv) pick up eligible appliances; and (v) responsibly
22 recycle the appliances.

23 20. The UNSE application emphasizes that prompt processing of incentive payments is
24 essential to customer satisfaction.

25 21. Program Analysis/Issues. Because JACO requires 10,000 units per year for three
26 years to recover the construction cost for a recycling facility, it would be cost-prohibitive for
27 JACO to build a facility in the UNSE territory. Instead, JACO would store appliances from
28 UNSE's southern territory with TEP appliances until a full semi-truck load is available for

1 transport to the Phoenix recycling facility. In UNSE's northern territory, appliances will be
2 transported to Las Vegas, which is closer to the Company's northern territory than Phoenix.

3 22. JACO's website states that it completely deconstructs each unit and safely disposes
4 of toxins and ozone-depleting chlorofluorocarbon gases (CFC-11). JACO ensures that over 95%
5 of the components and materials are recycled or "eliminated in an environmentally responsible
6 way."

7 23. Cost-Effectiveness. Based on Staff's analysis, the refrigerator measure has a
8 benefit-cost ratio of 2.69 and the freezer measure has a benefit-cost ratio of 2.04, making both
9 measures cost-effective.

10 24. Staff Recommendation. Staff has recommended that the UNSE Appliance
11 Recycling Program be approved and that it include both the refrigerator and freezer measures.

12 25. Staff has also recommended that the Company offer a \$30 incentive, rather than the
13 \$35 incentive proposed, but that the overall budget for incentives not be decreased. A \$30
14 incentive would be consistent with the incentives offered under the Arizona Public Service
15 Company ("APS") and the Salt River Project ("SRP") appliance programs, and would allow more
16 UNSE customers to participate, potentially removing more inefficient appliances from the grid.
17 (The proposed total incentive budget for 2012 is \$40,250. A per-unit incentive of \$35 would allow
18 up to 1,150 UNSE customers to participate, while an incentive of \$30 would allow up to
19 approximately 1,340 UNSE customers to participate.)

20 26. Staff has also recommended that the Appliance Recycling Program be expanded to
21 include non-residential customers with extra working refrigerators or freezers eligible for
22 recycling, with the same limit of two appliances per year, per customer. Expanding eligibility to
23 non-residential customers with eligible appliances would provide more UNSE customers,
24 particularly small businesses, with an opportunity to participate in the Appliance Recycling
25 Program. Such expanded eligibility potentially enhances participation levels and could help to get
26 additional inefficient appliances permanently off the grid.

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B. Multi-Family Housing Efficiency Program

27. Program Description. The proposed new Multi-Family Housing Efficiency Program (“Multi-Family Program”) would promote energy efficiency in the residential multi-family sector, to properties with five or more units. The Multi-Family Program is designed to overcome barriers typical to the multi-family housing market, which has limited participation in energy efficiency programs. UNSE’s Multi-Family program is designed to mirror the approved APS Multi-Family program.

28. The Multi-Family Program would offer property owners and managers the following options: (i) direct installation of CFLs, low-flow showerheads and faucet aerators; and (ii) improvements to common areas handled by the C&I Facilities Existing Facilities (“C&I Facilities”) Program. Once the Multi-Family Program has ramped up and matured, UNSE will look into developing a third track for existing complexes that are not part of a major renovation or rehabilitation. If cost-effective, and if approved by the Commission, this third track would focus on improvements to the building shell, including insulation and air sealing.

29. Objectives and Rationale. Multi-family housing offers large potential savings through economies of scale, but this has been a difficult sector to reach, in part because owners may not directly benefit from improving energy efficiency. By reducing key market barriers and targeting key decision makers, the Multi-Family Program may produce energy savings in this under-addressed market segment.

30. The objectives of the Multi-Family Program are to:

- Reduce peak demand and overall energy consumption in the multifamily housing market segment;
- Promote energy efficiency retrofits of both dwelling units and common areas in this market segment;
- Increase overall awareness about the importance and benefits of energy efficiency improvements to the landlord and property ownership community; and
- Help meet the energy savings targets of the UNSE DSM Implementation Plan.

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1 31. Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the
2 sector, projected costs per category, and total budget for each program.

3 32. Delivery and Marketing Strategy. Delivery of the direct installation, rehabilitation
4 and new construction components of the Program will be handled by an implementation
5 contractor.

6 33. Marketing and communications strategies will include website updates, local
7 newspapers and radio, bill messages and bill inserts, training seminars, call center on-hold
8 messages, direct mail promotion, outreach to rental housing industry associations, and work with
9 contractors and industry specialists. A primary emphasis will be placed on larger, older, and less
10 efficient complexes.

11 34. Program Analysis/Issues. Barriers to energy efficiency programs in the multi-
12 family market segment include: (i) split incentives, (ii) lack of capital, and (iii) lack of information
13 about energy efficiency improvements. These barriers are described in more detail, below.

14 35. Split Incentives. "Split incentives" describes the problem that arises in promoting
15 energy efficiency in rental units. The builders who construct rental properties, and the owners who
16 would be responsible for upgrades, do not usually pay the energy bills. Consequently, builders and
17 owners do not directly benefit from the lower energy costs that arise from investing in efficiency
18 measures, reducing or eliminating their incentive to participate in energy efficiency programs. At
19 the same time, the renters who would benefit from lower energy bills have no direct influence over
20 original construction and, with respect to renovations or retrofits, may not have the authority, the
21 incentive or the means to invest in energy efficiency for housing they do not own.

22 36. Lack of Capital and Awareness. Other problems can include a lack of capital for
23 improvements and a lack of awareness about energy efficiency. The Multi-Family Program would
24 address both through direct installation of low cost energy efficiency improvements in existing
25 complexes and through energy efficiency improvements to common areas through the C&I
26 Facilities Existing Facilities Program.

27 37. Commercial Versus Residential Multi-Family Housing. Another issue is that
28 ownership and decision-making tends to vary for multi-family housing, depending on the number

1 of units. Properties with 2-4 dwelling units typically fall under residential financing guidelines
2 and, for these smaller properties, the decision-makers are usually individuals. Larger properties
3 with 5 dwelling units or more typically fall under commercial lending guidelines and decision-
4 makers (at least for larger complexes) are typically corporate, institutional, or trusts (e.g., Real
5 Estate Investment Trusts). As such, the decision-making process and access to capital varies
6 between these two market segments. With this distinction in mind, the Company believes that the
7 2-4 unit market segment can be best served by the Residential Existing Home and Audit Direct
8 Install Program, while the 5+ Multifamily Housing market segment would be served by the
9 proposed Multifamily Program.

10 38. Cost-Effectiveness. Based on Staff's analysis, the benefit-cost ratio for each of the
11 three proposed direct install measures is : (i) CFLs 2.8; (ii) low-flow showerheads 2.3; and faucet
12 aerators 2.9. All three measures have benefit-cost ratios above 1.0, making them cost-effective.

13 39. As noted elsewhere, improvements to common areas will be a part of the C&I
14 Facilities Existing Facilities Program. Costs and savings associated with the common area
15 improvements will, accordingly, be tracked as a part of that program.

16 40. Staff Recommendation. Staff has recommended that the proposed Multi-Family
17 Program be approved, but that older, less efficient and low-income complexes be a primary focus
18 for the Multi-Family Program's activities.

19 **RESIDENTIAL EXISTING PROGRAMS (WITH PROPOSED MODIFICATIONS)**

20 **C. Efficient Products**

21 41. Program Description. This is an existing Residential program previously approved
22 by the Commission in Decision No. 70556 (October 23, 2008), with four proposed new measures.
23 The Efficient Products Program (formerly called the CFL Buy-Down Program) would promote the
24 purchase of energy efficient retail products through in-store buy-down promotions. In addition to
25 the existing CFL measure, four new measures are proposed for the Efficient Products Program,
26 beginning in 2012. The measures and proposed incentives are as follows: (i) Variable Speed Pool
27 Pump (\$200 per unit); (ii) Pool Pump Timer (\$75 per unit); (iii) Residential LED light (\$30 per
28

1 bulb) and (iv) Advanced Power Strips (\$10 per sensor). CFL incentives vary by type of CFL, but
2 the average is \$1.15 per unit.

3 42. Program Objectives and Rationale. The new measures will offer residential
4 customers additional opportunities to increase energy efficiency. The Efficient Products Program
5 promotes market transformation through retail partnerships, training for retail staff, and increased
6 stocking and selection of efficient retail products.

7 43. Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the
8 sector, projected costs per category, and total budget for each program.

9 44. Delivery and Marketing. UNSE is not proposing any significant changes in
10 implementation approach or delivery strategy, except for the addition of new measures starting in
11 2012. Delivery channels for the new measures will continue to be via a combination of both buy-
12 downs and possible mail-in rebates with participating retailers. Program marketing is primarily
13 through mass-market channels (e.g., radio, newspaper, website, etc.) and through education and
14 training of participating retailers.

15 45. Program Analysis/Issues. While there are reports questioning the life expectancy of
16 CFLs in practice, there is currently little actual study data on the lifespan of CFLs. (Verification
17 testing requires only that eight out of ten units operate for 40% of rated life.) Assumptions
18 regarding the lifespan of CFL measures should be re-evaluated for the Company's next
19 Implementation Plan, and any changes to these assumptions should be incorporated into cost-
20 effectiveness and savings calculations for the Efficient Products Program.

21 46. The Company indicated that it can not reasonably predict the level of participation
22 for the Pool Pump Timer and Variable Speed Pool Pump measures for the UNSE Plan. The
23 absence of chains marketing pool accessories in the UNSE territory means that stores will need to
24 be approached on an individual basis, making the level and timing for participation uncertain.

25 Cost-Effectiveness.

26 47. Three of the four proposed new measures have benefit-cost ratios above 1.0,
27 making them cost-effective. Although UNSE supplied no estimates on participation for the
28 Variable Speed Pool Pump and Pool Pump Timer measures, Staff determined that both measures

1 would be cost-effective if participation levels reached 250 annually, or 5% of the levels projected
2 for the other new proposed measures.

3 48. The Variable Speed Pool Pump has a benefit-cost ratio of 1.29, the Advanced
4 Power Strips have a benefit-cost ratio of 1.1, and the Pool Pump Timer measure has a benefit-cost
5 ratio of 2.16. The Residential LED light has a benefit-cost ratio of 0.72, well below 1.0. (The
6 lower benefit-cost ratio is largely due to energy savings that are low compared to the incremental
7 cost of the measure.)

8 49. Staff Recommendations.

- 9 • Staff has recommended that the Efficient Products Program be approved, and
10 continue to offer CFLs, with the addition of the Variable Speed Pool Pump,
11 Advanced Power Strip and Pool Pump Timer measures.
- 12 • Staff has also recommended that the Residential LED Light measure not be
13 approved at this time, but that the budget associated with Residential LED Light
14 measure be re-allocated to the Efficient Products Program measures approved
15 by the Commission.
- 16 • Staff has recommended that the lifespan of CFL measures should be re-
17 evaluated for the Company's next Implementation Plan, and any changes to
18 these assumptions be incorporated into cost-effectiveness and savings
19 calculations for the Efficient Products Program.

18 D. Low-Income Weatherization

19 50. Program Description. UNSE is proposing a change in eligibility for this program.
20 The Low-Income Weatherization ("LIW") Program is an existing program (Decision No. 70347,
21 May 16, 2008) designed to conserve energy and lower utility bills for UNSE households with
22 limited incomes. The primary goal of the LIW Program is to fund weatherization for low-income
23 homes, to reduce energy costs and improve comfort and safety for low-income customers. The
24 LIW Program also conserves energy, and reduces both electric and gas consumption.

25 51. Program Objectives and Rationale. The objective of the Program is to coordinate
26 with the Arizona Energy Office (now the Governor's Office of Energy Policy ("OEP")) to follow
27 state Weatherization Assistance Program rules in using UNSE ratepayer funds to lower household
28 energy consumption for low-income customers and increase the number of weatherized homes.

1 52. Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the
2 sector, projected costs per category, and total budget for each program.

3 53. Delivery and Marketing Strategy. The Program is delivered through the Western
4 Arizona Council of Governments (“WACOG”), Northern Arizona Council of Governments
5 (“NACOG”) and Southeastern Arizona Community Action Program (“SEACAP”). All are State-
6 approved weatherization agencies, providing program administration, planning, program
7 promotion, coordination, participant eligibility and priority, labor, materials, equipment and
8 tracking. Funding is provided to the agencies upon documentation of work completed.

9 54. Due to the popularity of the Program, DSM revenues are not allocated to
10 advertising and promotion. Promotion takes place through presentations to community
11 organizations, through information left at community and recreation centers, and through calls
12 directed from UNSE. UNSE also promotes the Program on its website and through speaking
13 engagements and outreach presentations.

14 55. Eligibility. UNSE is proposing to tie the eligibility level for the UNSE LIW
15 Program to the eligibility level set for the federal Low-Income Home Energy Assistance Program
16 (“LIHEAP”). Currently, eligibility for the UNSE LIW Program is set at 150 percent of the federal
17 poverty level, while the federal LIHEAP eligibility level is set at 200 percent. Matching the UNSE
18 LIW eligibility level with LIHEAP (whether increasing or decreasing) would streamline the
19 administrative process for community action agencies delivering the Program and may allow the
20 Program to serve more customers.

21 56. Cost-Effectiveness. Staff reviewed the cost-effectiveness of the Low-Income
22 Weatherization Program based on the most recent available data. The benefit-cost ratio for the
23 Low-Income Weatherization Program is 1.01, slightly above the level required for cost-
24 effectiveness.

25 57. Staff Recommendation. The Low-Income Weatherization Program enhances the
26 energy efficiency of low-income Residential houses on a cost-effective basis, reducing utility costs
27 and improving the health and safety for low-income customers.

28

- 1 • Staff has recommended that the Low-Income Weatherization Program be approved
2 for continuation as part of UNSE's Implementation Plan.
- 3 • Staff has also recommended that UNSE be allowed to tie the eligibility level for the
4 UNSE LIW Program to the eligibility level set for the federal Low-Income Home
5 Energy Program ("LIHEAP"), so that the eligibility levels remain consistent over
6 time.

6 **E. Residential New Construction**

7 58. Program Description. The Residential New Construction ("RNC") Program, also
8 known as the Zero Net Energy Homes ("ZEH") Pilot Program, is a continuation of the existing
9 program design that was approved by Decision No. 71641 (April 14, 2010). The Company has
10 requested to continue the RNC Program without modifications.

11 59. The RNC Program is designed with an incentive schedule that awards larger
12 incentives for more efficient homes. The incentive schedule for the RNC Program provides a \$400
13 incentive for each Tier 1 home, a \$1,500 incentive for each Tier 2 home, and a \$3,000 incentive
14 for each Tier 3 home.

15 60. To qualify for an incentive, homes must be tested by an approved energy rater, and
16 meet one of the three tiers in the RNC Program based on a Home Energy Rating System ("HERS")
17 Index score. On the HERS index scale, a score of 100 is considered the average efficiency of
18 baseline new construction, while a HERS index score of 0 represents a home that produces all of
19 its energy through on-site generation from renewable energy. In other words, the lower the HERS
20 score, the more efficient the home. Under the RNC Program, Tier 1 requires a minimum HERS
21 score lower than or equal to 85; Tier 2 requires a HERS score lower than, or equal to, 70; and Tier
22 3 requires a HERS score lower than, or equal to, 45.

23 61. Program Objectives and Rationale. The objectives of the RNC Program are to
24 advance energy efficient building practices through builder training, and to increase customer
25 awareness of the benefits associated with energy efficient construction, combined with application
26 of renewable technologies, such as solar photovoltaic and solar hot water systems consistent with
27 achieving the goals of the Arizona Renewable Energy Standard.

28

1 62. Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the
2 sector, projected costs per category, and total budget for each program.

3 63. Delivery and Marketing Strategy. Program delivery is provided by UNSE, and
4 through participation of independent Residential Energy Services Network (“RESNET”) approved
5 home energy raters. UNSE provides outreach to targeted builders, conducts builder training on
6 marketing ENERGY STAR homes and on the ENERGY STAR performance standard, and
7 mentors participating builders and raters.

8 64. The Program is marketed to select builders primarily through direct business-to-
9 business contacts. The Program is marketed to consumers at home shows, parade of homes, and
10 other events focused on homebuilding as advertised through mass market and targeted media
11 outlets.

12 65. Cost-Effectiveness. In Decision No. 71641 (April 14, 2010) Tiers 2 and 3 were
13 added to the existing Residential New Home Construction Program (previously approved in
14 Decision No. 70522. September 30, 2008). Tier 2 was cost-effective at a benefit-cost ratio of 1.16
15 without a monetized value for carbon. No benefit-cost analysis of Tier 3 was done because,
16 according to information provided by UNSE, the only difference between Tier 2 and Tier 3 were
17 the additional costs for solar measures.

18 66. The Decision No. 71641 the Company was also ordered to provide information on
19 the performance of the Program, by Tier, and to file an application to continue, modify, or
20 terminate the pilot program forty-two months after the date of the decision (April 14, 2010). The
21 Company has complied with the Decision by providing per-Tier information in its semi-annual
22 filings with the Commission. The 42-month filing is due in October 2013.

23 67. Staff Recommendation. Staff has recommended that the UNSE RNC Program be
24 approved for continuance pending action on the Company’s forty-two month filing, as referenced
25 in Decision No. 71641.

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F. Existing Homes and Audit Direct Install

68. Program Description. The Existing Homes and Audit Direct Install (“Existing Homes”) Program is an existing program that replaced the former Residential HVAC Program (approved by Decision No. 72024 on December 10, 2010). No modification of this Program is being proposed in the current filing.

69. The Existing Homes Program is targeted to existing homes in need of energy efficiency improvements. The Program has two components, an initial energy audit with direct install of CFLs and advanced power strips, followed by identification of actionable, larger scale home energy efficiency improvements and referral to local Building Performance Institute (“BPI”) certified contractors to implement major home energy improvements such as insulation, air-sealing and HVAC. Rebates are paid to contractors for HVAC and thermal envelope measures, with incentives ranging from \$250 to \$1,700 per measure. The current average total incentive per participating home is approximately \$1,400. UNSE plans to submit the Existing Home Program to EPA with a request to utilize EPA labeling as Home Performance with ENERGY STAR.

70. Program Objectives and Rationale. The Existing Homes Program achieves energy and demand savings from the installation of energy efficient measures and contributes toward transforming the industry to emphasize best practice building science principles. The Existing Homes Program invests in training and mentorship of participating contractors to understand the “house as a system” building science and to achieve BPI certification. UNSE has included a Residential Financing Pilot Program in this Plan for 2011-2012 which will be used to enhance participation in this program.

71. Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

72. Delivery and Marketing Strategy. UNSE provides program management oversight and marketing. A third party implementation contractor will be responsible for recruitment, training, and mentorship of participating contractors and trained energy auditors, data tracking, rebate processing and technical support. Auditors will provide referrals to BPI-certified contractors, and referral information will be reported to UNSE. Measure installation to residential

1 customers will be provided by participating independent contractors. In 2011-2012, program
2 delivery will be coordinated with APS and Southwest Gas Corporation ("Southwest Gas") to
3 address programming overlap among the utilities.

4 73. UNSE provides program marketing and customer awareness-building through
5 website promotion, community interest groups, mass-market channels (e.g. radio, newspaper, etc.),
6 brochures and bill inserts, high bill inquiries, trade ally marketing efforts, contractor enrollment
7 and training.

8 74. Cost-Effectiveness. The enhanced Existing Homes Program was approved in
9 December 2010, with a benefit-cost ratio of 1.06 (1.20 if natural gas savings are included), making
10 the Program cost-effective. No modifications of the Program have been proposed, so a re-
11 calculation of cost-effectiveness was not necessary.

12 75. Staff Recommendation. Staff has recommended that the Existing Homes and Audit
13 Direct Install Program be approved for continuance.

14 **G. Shade Tree**

15 76. Program Description. The Shade Tree Program is an ongoing program, approved in
16 Decision No. 70523 (September 30, 2008) and approved for continuance in Decision No. 71834
17 (August 10, 2010). No modifications have been proposed for the Shade Tree Program. The Shade
18 Tree Program promotes energy conservation and environmental benefits by motivating customers
19 to plant desert-adapted trees in locations where the trees will provide shade and reduce HVAC
20 load.

21 77. Program Objectives and Rationale. The objectives of the Program are to promote
22 the strategic planting of trees to provide shade, thereby reducing the cooling load of homes and
23 associated energy usage and to educate school-age children and the public on the conservation and
24 environmental benefits of planting trees.

25 78. Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the
26 sector, projected costs per category, and total budget for each program.

27 79. Delivery and Marketing Strategy. The UNSE Shade Tree Program provides a \$15
28 per tree incentive to customers. Customers submit an application, along with receipts, for credits

1 on their electric bills. Marketing is done through bill inserts, outreach presentations, the UNSE
2 website and through communications with participating retailers.

3 80. Cost-Effectiveness. In Decision No. 71834, Staff calculated the benefit-cost ratio
4 for this Program at 1.29, making it cost-effective. No modifications have been proposed for this
5 Program.

6 81. Staff Recommendation. Staff has recommended that the UNSE Shade Tree
7 Program be approved for continuance.

8 **H. Bid for Efficiency**

9 82. Program Description. Under UNSE's Bid for Efficiency Program ("BFE
10 Program"), customers or project sponsors would conceive their own projects and then bid
11 competitively for incentives within broad program guidelines. UNSE would then select winning
12 applicants based on specified criteria.

13 83. BFE Program participants and project sponsors may include commercial customers,
14 Energy Service Companies ("ESCOs") or other aggregators who organize proposals that involve
15 multiple sites.

16 84. Program Objectives and Rationale. The BFE Program seeks to encourage
17 customers and project sponsors to think holistically regarding energy systems and to develop
18 projects designed to optimize system energy use by encouraging a systems approach to energy
19 efficiency.

20 85. The BFE Program would provide an incentive for participants to use multiple EE
21 approaches at one or several sites simultaneously. The subject Program attempts to address
22 customer market barriers such as small savings levels at multiple sites, longer payback periods and
23 organizing implementation contractors.

24 86. UNSE's implementation goals for the Program are as follows:

- 25 • Ensure projects are submitted, approved, implemented and verified in a timely
26 manner;
- 27 • Allow each project to be customer-driven; responsibility will be placed on the
28 customer (or project sponsor) to select appropriate trade and professional allies
to design and implement the project and to prepare the incentive application;

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- Encourage implementation of multiple measures for comprehensive projects; and
- Encourage aggregated applications that involve implementation at multiple sites.

87. Budget. See the UNSE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

88. Delivery and Marketing. The BFE Program will focus on market segments with significant savings potential, unique load or energy savings characteristics, and those that require specialized delivery or support services. The target market consists primarily of larger customers and customer groups that may include grocery stores, convenience stores, or data centers, business sectors that have historically been hard to reach.

89. Eligibility. Any entity, customer, or project sponsor may participate if the proposal meets the minimum application requirement of 200,000 kWh in savings for the first year. Electric loads may be aggregated among multiple facilities to meet the kWh threshold. Eligible project sponsors may include, but are not limited to UNSE customers, ESCOs and engineering / architecture firms. Any third-party project sponsor must submit an application with the consent and support of the identified UNSE customer. To provide participants with maximum flexibility, the Program will not explicitly specify eligible measures, but pre- and post-installation metering will be required to ensure that savings estimates are in line with actual savings produced by the projects. All proposed measures must meet the following requirements:

- Produce a measurable and verifiable reduction in energy consumption;
- Produce savings through an increase in energy efficiency or better utilization of energy through improved production equipment or controls;
- Be installed in a retrofit application;
- Have a useful life of five years or greater; and
- Prove cost effective using the Societal Cost Test (applies to total project including all measures).

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1 90. Examples of eligible measures include, but are not limited to, installation of
2 Premium® efficiency motors, lighting system upgrades, HVAC system improvements, heat
3 recovery systems, and energy system control upgrades. Project sponsors are free to propose
4 measures, as long as the above requirements are met. UNSE anticipates an average incentive of
5 \$0.15 / kWh, based on multiple measures with varying savings. With average savings of 400,000
6 kWh per project, the average incentive would be \$60,000.

7 91. The following implementation process is proposed for the BFE Program:

- 8 • UNSE, and/or its implementation contractor (“IC”), will advertise the BFE
9 Program to target customers and trade allies;
- 10 • Customers or trade allies will submit bids for its EE projects.
- 11 • UNSE/IC will evaluate projects and make awards;
- 12 • UNSE/IC will perform pre-installation metering;
- 13 • Customer will implement the proposed project;
- 14 • UNSE will pay 50 percent of the incentive amount prior to installation;
- 15 • UNSE/IC will perform post-installation metering; and
- 16 • UNSE will pay the remaining incentive amount based on the actual M&V
17 energy savings (based on first year operation).

18
19 92. UNSE proposes to implement the BFE Program as a pilot during 2011 and 2012.
20 Pilot results would be evaluated in 2013. If the market response and measure savings indicate the
21 Program is cost-effective, and achieving substantial savings, the Company would continue the
22 Program offering in its 2014 EE Implementation Plan.

23 93. Program Analysis/Issues. The BFE concept is being used by several other western
24 utilities, including San Diego Gas & Electric in California and Xcel Energy in Colorado. With a
25 focus on whole-building efficiency, coupled with the ability of participants to select from a wide
26 range of potential efficiency measures, the BFE Program could offer an opportunity to customers
27 and project sponsors to design cost-effective energy efficiency projects.

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1 94. Under UNSE's proposal, 50 percent of the incentive for each project is paid prior to
2 measure installation, with the remaining incentive amount based on the actual energy savings, paid
3 after the first year of operation. Staff believes this payment sequence offers an important "true-up"
4 opportunity that ensures projects receive incentives proportionate to their actual energy efficiency.
5 However, Staff is concerned that there are no limits proposed for the maximum incentive available
6 to an individual project. Therefore, Staff recommends that incentives be capped at 60 percent of
7 the incremental cost of the efficiency measures utilized in the project.

8 95. UNSE estimates annual energy savings of 400,000 kWh, and peak demand savings
9 of 36.53 kW for each of the 10 projects anticipated during the two-year pilot program. Based on
10 these anticipated savings, Staff has determined that the BFE Program would have a benefit / cost
11 ratio of 1.78, indicating that the Program would be cost-effective.

12 96. Staff Recommendations

- 13 • Staff has recommended that the UNSE Bid for Efficiency Pilot Program be
14 approved as a two-year pilot program as discussed herein.
- 15 • Staff has further recommended that individual project incentives under this
16 program be capped at 60 percent of the incremental costs of the efficiency
measures included in the project.

17 **I. RETRO-COMMISSIONING PROGRAM**

18 97. Program Description. UNSE's proposed Retro-Commissioning Program ("RCx
19 Program") would identify deficiencies in existing facilities and makes necessary adjustments to
20 produce energy savings and other benefits such as occupant comfort. The proposed new RCx
21 Program is geared to assist owners of large existing commercial and industrial facilities in
22 improving energy performance. UNSE states that improvements made in response to RCx efforts
23 are comparatively inexpensive to implement and typically offer paybacks of less than two years.

24 98. The RCx Program would begin with a Screening Energy Audit. Participants then
25 proceed, if eligible for the RCx Program, through a three part retro-commissioning study: (i) the
26 Operations and Maintenance Review Phase (operational procedures and maintenance practices);
27 (ii) the Systems Commissioning Phase (performance testing, trending and metering), and (iii) the
28 Systems Optimization Phase (high performance building operation strategies).

1 99. A 2009 study of retro-commissioning by Lawrence Berkley National Laboratories
2 noted a median savings of 16 percent of whole building energy costs across 561 projects.
3 Documented benefits of RCx programs include, but are not limited to the following:

- 4 • Up to 15 percent energy savings
- 5 • Reduced occupant complaints and improved occupant comfort
- 6 • Increased equipment life
- 7 • Increased facility documentation
- 8 • Facility staff training

9 100. Program Objectives and Rationale. The Program would target large facilities which
10 have lighting, cooling, and ventilation as their largest energy uses. Large office and retail facilities
11 represent the most effective building type for the RCx approach.

12 101. Budget. See UNSE Implementation Plan Budget Table herein, which lists the
13 sector, projected costs per category and total budget for the program.

14 102. Delivery and Marketing Strategy. UNSE would offer an online application for
15 customers interested in the RCx Program on the UNSE website. The screening audit would
16 provide the customer with a basic energy audit, identifying basic equipment upgrades and control
17 strategies that would result in energy savings for the customer. The audited facilities would also
18 receive ENERGY STAR® Portfolio Manager ratings to benchmark the facility versus similar
19 facilities in the area. The energy audit would be provided free of charge to all eligible applicants
20 and will be used to determine eligibility for participation in subsequent phases of the RCx
21 Program. The Program is designed so that customers can move to progressively higher levels of
22 examination and analysis, only after they have implemented measures identified in the Screening
23 Audit, and later, the Operations and Management Review phases of the Program.

24 103. For selected customers, and subsequent to the Screening Energy Audit, UNSE
25 would perform an Operations and Maintenance (“O&M”) Review of the subject facility’s energy
26 usage, to evaluate operational procedures and maintenance practices related to major equipment.
27 The result of this review would be a list of facility improvement measures with estimated cost and
28 savings values. Customers would also receive training on O&M best practices and guidance on

1 implementing facility improvements. The O&M Review would be provided by UNSE at no cost
2 to the customer.

3 104. For selected customers that implement recommendations identified in the O&M
4 Review, UNSE would offer Systems Commissioning services. Systems Commissioning services
5 utilize advanced performance testing, trending and metering procedures that identify further
6 opportunities for energy system repairs, upgrades and replacements. Measures identified during
7 this phase include repairs, upgrades and capital planning that would allow existing systems to
8 operate within the parameters developed during the O&M review. Systems Commissioning
9 services would be paid by the Program.

10 105. The final phase of the RCx Program is known as Systems Optimization. This phase
11 of the Program builds on work completed in prior Program phases by introducing cutting-edge
12 practices developed for today's high performance buildings. Services for this phase would be
13 provided by the Program for selected customers who implement recommendations identified
14 during the Systems Commissioning phase of the Program.

15 106. Eligibility. The RCx Program will be available to UNSE commercial and industrial
16 customers with at least one meter on Large Industrial and Commercial rate schedules (Large
17 General Service, Large General Service - Time of Use, and Large Power Service). In addition, the
18 facility must contain a minimum of 100,000 square feet of conditioned space and have at least one
19 full-time facility operations/management staff.

20 107. Program Analysis/Issues. Presently, the lack of knowledge by building operators,
21 the lack of qualified workers, and the upfront costs of the audit and associated equipment
22 optimization are barriers to improving the energy efficiency of commercial and industrial facilities.
23 The UNSE Retro-Commissioning Program intends to overcome these barriers by providing facility
24 owners with the information necessary to identify energy-saving opportunities and manage energy
25 consumption at their facilities.

26 108. Cost-Effectiveness. UNSE estimates annual energy savings of 200,000 kWh, and
27 peak demand savings of 18.26 kW for each of the five projects anticipated through the end of
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1 2012. Based on these anticipated savings, Staff has determined that the BFE Program would have
2 a benefit-cost ratio of 1.69, indicating that the Program would be cost-effective.

3 109. Staff Recommendations. Staff has recommended that the UNSE Retro-
4 commissioning Program be approved.

5 **J. SCHOOL FACILITIES PROGRAM**

6 110. Program Description. Schools represent a market segment that has historically been
7 underserved. UNSE has proposed a School Facilities Program ("Schools Program") to increase
8 participation in energy efficiency retrofits by schools.

9 111. The UNSE Schools Program would be open to participation by all existing
10 kindergarten through twelfth grade school facilities in the UNSE service territory, including
11 charter schools. The proposed Schools Program would utilize the same delivery method and pay
12 incentives for the same energy efficiency measures as are found in the existing UNSE C&I
13 Facilities Program ("C&I Program"), but the Schools Program would only service eligible schools.
14 UNSE proposes to pay up to 100 percent of the incremental cost of the efficiency measures for the
15 Schools Program, as compared to up to 85 percent for measures in the existing C&I Program.

16 112. The Schools Program would utilize an upstream market incentive design that
17 provides incentives directly to contractors installing the energy efficiency measures. Specifically,
18 the Schools Program would offer the following products and services:

- 19 • Educational and promotional pieces designed to assist contractors with the
20 marketing of the Schools Program to schools; and
- 21 • Education and promotional efforts for schools and contractor allies on how the
22 Schools Program functions, what energy efficiency technologies are offered,
23 what incentives are provided and the benefits of the measures.

23 113. The lighting measures included in the Schools Program are:

- 24 • Retrofit of T12 fluorescent lighting with T8 lighting;
- 25 • Retrofit of standard T8 lighting to premium T8 lighting;
- 26 • Retrofit of high intensity discharge lighting with T8 or T5 lighting;
- 27 • Replacement of incandescent lamps with screw-in compact fluorescent lamps
28 ("CFL");

- Retrofit of existing incandescent and CFL exit signs with LED or electroluminescent exit signs;
- Lighting system occupancy sensors; and
- Delamping and reduced lighting power density.

114. The HVAC measures included in the Schools Program are:

- High efficiency air conditioners and heat pumps (incentives vary by SEER rating);
- Programmable thermostats; and
- Shade screens and window films to reduce solar heat gain.

115. The Schools Program would also include variable speed drive motors to optimize performance, vendor miser sensors which turn off or turn down refrigeration and lighting in vending machines when not in use, and smart strips to better control plug loads. Whole building custom incentive applications would also be considered where appropriate. Table 1-1 below presents a summary of the incentives offered for each measure.

Table 1-1
School Facilities Efficiency Incentive Summary

Lighting Measures	Incentive
Replace T12 systems with T8	\$55/fixture
Energy Efficient Integral Compact Fluorescent Lighting	\$11/lamp
Replace Incandescent & CFL Exit Signs	\$55/sign
Install Occupancy Sensors on Lighting Fixtures	\$96/sensor
Daylighting Controls	\$751/kW base load
Hard Wire CFL	\$15/bulb
HIDs to T8/T5	\$96/fixture
Induction Lighting	\$196/lamp
Outdoor CFL	\$9/lamp
Reduced Lighting Power Density (LPD)	\$4,472/customer
Screw-in Cold Cathode CFL	\$12/bulb
T8 to Premium T8	\$21/lamp
Delamping	\$6/fixture
HVAC Measures	
Programmable Thermostats	\$204/thermostat
High-efficiency Packaged AC and Heat Pumps (<65,000 btuh)	\$440 to \$1,321 (depending on size and

	SEER rating)
Shade Screens	\$4/sq.ft.
Window Films	\$3/sq.ft.
Motors	
Variable Speed Drives	\$377/HP
Plug Loads	
Beverage Controls (“Vending Miser”)	\$199/sensor
Snack Controls (“Vending Miser”)	\$103/sensor
Advanced Power Strips – Load Sensor	\$32/strip
Advanced Power Strips – Occupancy Sensor	\$90/strip
Advanced Power Strips – Timer Plug Strip	\$19/strip
Whole Building	
Custom Measures	\$6,535/customer

116. Budget. The Program will begin in 2012 with a proposed first-year budget of \$162,513. See the UNSE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

117. Delivery and Marketing. Schools that are interested in the Schools Program would apply for participation using an on-line proposal generation and project tracking system. This Internet-based system would provide an analysis of project costs and projected savings. Projects that are selected by UNSE based on projected energy savings would utilize contractors to provide turn-key installation services to schools. Incentives would be paid directly to the contractors.

118. UNSE would assign an in-house program manager to oversee the Schools Program, provide guidance on Schools Program activities and provide a point of contact for schools that are interested in participation, or have questions or concerns regarding the Schools Program. The implementation contractor would be responsible for program administration, application and incentive processing, monitoring activities of installation contractors, participation tracking and reporting, and overall quality control and management of the delivery process. In addition, the implementation contractor would conduct outreach to contractors, marketing and promotion to schools, and education and training on the benefits and functioning of the Schools Program.

119. Installation contractors would promote the Schools Program directly to schools, provide turn-key installation services and have access to the Schools Program Internet processing system to prepare proposals.

1 120. Program Analysis/Issues. The Schools Program lists a total of 24 individual energy
2 efficiency measures that are eligible for incentives. This program is designed to install multiple
3 measures on a “whole building” basis, where measures tend to complement or reinforce one
4 another and, for this reason, cost-effectiveness is calculated on a per-project basis, where savings
5 and costs from a typical set of project measures are compared. The Schools Program also
6 encourages the creative combination of listed measures with other measures that are not on the
7 Schools Program’s incentive list by offering a “custom measures” category. Proposed “custom
8 measures” must demonstrate energy savings and pass the Societal Cost Test.

9 121. In order to evaluate the Schools Program at the project level, Staff analyzed a
10 typical school energy efficiency project that included delamping a portion of the school facility
11 and replacing the remaining lighting fixtures with T8 upgrades. In addition, the model project
12 includes data for programmable thermostats, occupancy sensors, energy efficient exit signage,
13 vending machine controls and advanced timer power strips. By combining these particular
14 measures, and using anticipated savings values for each measure, Staff determined that this
15 “typical” school project would cost approximately \$2,821 dollars in incentives while saving
16 approximately 40,956 kWh of energy and 4.13 kW of demand load.

17 122. Cost-Effectiveness. Based on these anticipated savings, Staff has determined that
18 the typical School Facilities Program project would have a benefit-cost ratio of 2.87, indicating
19 that the Schools Program would be cost-effective. Staff further believes that this ratio is indicative
20 of the benefits of similar projects that would be completed under the Schools Program.

21 123. Staff Recommendations. Staff has recommended that the School Facilities Program
22 be approved.

23 K. C&I Demand Response

24 124. Program Description. UNSE is requesting budget approval for a new C&I Demand
25 Response Program that would manage peak demand and mitigate system emergencies. This
26 program is part of the Company’s Implementation Plan, and is part of the same docket, but was
27 filed separately, on July 20, 2011. Reductions in peak demand from this program would be
28 credited toward the Energy Efficiency Standard (“EES”), as permitted under R14-2-2404.C.

1 125. This is a commercial and industrial load curtailment program. Customers are
2 compensated with incentives for their participation at negotiated levels that vary depending on
3 multiple factors including the size of the facility, amount of kW under load control, and the
4 frequency with which the resource can be utilized.

5 126. Program Objectives and Rationale. Commercial and industrial load represents a
6 total of approximately 14 percent of system demand during peak hours in the late afternoon and
7 evening during summer months. Modification of controls for chillers, rooftop AC units, lighting,
8 fans, and other end uses can reduce power demand at peak times. In addition, the Program may be
9 used to support standard benefits of demand-response programs which include avoided firm
10 capacity required to meet reserve requirements, reduced or avoided open-market power purchases
11 during periods of high energy prices, and greater grid stability and reduction in outages due to
12 reduced grid demand.

13 127. Delivery and Marketing Strategy. The Program is delivered on a turnkey basis by a
14 third-party implementation contractor, who negotiates load reduction agreements with multiple
15 customers and “aggregates” these customers to provide UNSE a confirmed and guaranteed load
16 reduction capacity available upon request while maintaining a degree of flexibility in how the
17 curtailments are achieved. Since the demand response (“DR”) aggregator, EnerNOC, is obligated
18 to provide the required megawatts of load curtailment, the process is similar to a power purchase
19 agreement.

20 128. Recruitment is targeted to help ensure that customers invited to participate are able
21 to provide reliable and significant load control reductions.

22 129. The responsibilities of EnerNOC will include, but not be limited to:

- 23 • recruitment of participants;
- 24 • participant assistance in designing effective load control strategies;
- 25 • provision of load control equipment and/or ensuring that participants
 successfully enable curtailment capability;
- 26 • participant tracking and reporting;
- 27 • establishing a head-end software system that can be used by UNSE to call
 and monitor load control events;
- 28 • call center services;
- customer satisfaction problem resolution; and

- negotiation and payment of incentives to customers for program participation.

130. UNSE staff will be responsible for the following:

- managing the contractor(s) and tracking program implementation;
- developing internal staff training and protocols for calling load control events; and
- public relations, program promotion, cross-program coordination of other demand-side management and renewable opportunities.

131. Cost Effectiveness. UNSE's analysis indicates a benefit-cost ratio of 1.69. Staff's methodology yields a lower benefit-cost ratio of 1.17, indicating cost-effectiveness.

132. Staff Recommendation. Staff has recommended that the C&I Direct Load Control Program be approved.

L. Commercial and Industrial ("C&I") Facilities

133. Program Description. UNSE is requesting budget approval to continue this program and approval of these additional measures:

- Shade Screens
- Window Films
- Induction Lighting
- LED Channel Signs
- Outdoor CFL
- Reduced LPD
- T8 to Premium T8
- Premium T8 Lighting
- Beverage Controls
- Snack Controls ("vending miser")
- Refrigerated Display
- Automatic Door Closers
- Refrigerated Display Gaskets
- Advanced Power Strips - Occupancy Sensors
- Advanced Power Strips - Timer Plug Strip
- Advanced Power Strips - Load Sensor

134. The C&I Facilities Program is an existing program, approved by the Commission in Decision No. 70524 (September 30, 2008). The Program offers incentives for a select group of retrofit and replace-on-burnout energy efficiency measures in existing facilities. Eligible customers include small and large commercial customers. The Program offers incentives for the

1 installation of energy efficiency measures, including lighting equipment and controls, HVAC
2 equipment, motors and motor drives, compressed air, and refrigeration measures. Incentives for
3 new lighting measures range from \$2 to \$1,371, and refrigeration measures range from \$8 to \$40.

4 135. Program Objectives and Rationale. The C&I Facilities Program is designed to
5 address certain barriers to this market segment, including limited investment capital, limited
6 awareness of energy cost savings, and required short-term payback. The Program's purpose is to
7 persuade large business customers to install high-efficiency equipment at their facilities and
8 encourage contractors to promote the Program and provide turn-key installation services to small
9 business customers.

10 136. Budget. See UNSE EE Implementation Plan Budget Table herein which lists the
11 sector, projected costs per category, and total budget for each program. The C&I Facilities
12 Program shows total costs for 2011-12 of \$ 3,556,314 and total lifetime net benefits of \$5,134,805.

13 137. Delivery and Marketing Strategy. According to the UNSE application, the Program
14 is operated as an "up-stream" market program, with incentives offered to prequalified contractors
15 who can provide turn-key installation services for customers. The intention is to reduce the
16 measure payback to one year or less. The Program also includes consumer and trade ally
17 educational and promotional pieces designed to provide decision makers in the small business
18 market with the information necessary to make informed choices (and increase awareness).

19 138. The marketing strategy includes educational seminars tailored to the small business
20 market, major media advertising, website promotion, outreach and presentations at professional
21 and community forums, and direct outreach to customers who meet the criteria for the Program.

22 139. Cost-Effectiveness. In order to evaluate the C&I Program at the project level, Staff
23 analyzed a model commercial energy efficiency project that included delamping a portion of a
24 typical 20,000 square foot commercial facility and replacing the remaining lighting fixtures with
25 Premium T8 upgrades. In addition, the model project includes data for occupancy sensors, plug
26 strips, and energy efficiency exit signage. By combining these particular measures, and using
27 anticipated savings values for each measure, Staff determined that this "typical" commercial
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1 project would cost approximately, \$10,072 in incentives, while savings approximately 70,000 kWh
2 and 37,000 kW.

3 140. Based on these anticipated costs and savings, Staff determined that the typical CI
4 project would have a benefit-cost ratio of 1.38, indicating that the C&I Program would be cost-
5 effective. Staff believes that this ratio is indicative of the benefits of similar projects that would be
6 completed under the C&I Program.

7 141. Recommendation. Staff has recommended approval that the C&I Facilities
8 Program be approved for continuance, with the proposed new measures.

9 **M. BEHAVIORAL COMPREHENSIVE**

10 142. Program Description. The proposed Behavioral Comprehensive Program
11 (“Behavioral Program”) consists of five educational subprograms. The focus of the Behavioral
12 Program is to educate Residential customers on how changes in behavior, including purchasing
13 decisions, can improve energy efficiency. Most of the subprograms include low-cost measures,
14 such as CFLs, faucet aerators, LED nightlights and refrigerator thermometers, in addition to the
15 educational components.

16 143. The table below lists and describes the subprograms that make up the Behavioral
17 Comprehensive Program. More detailed program descriptions are provided in the following
18 paragraphs:

Subprogram	New (proposed) or existing	Descriptions
Home Energy Reports	New(proposed)	Comparison of energy use to that of neighbors. An on-line energy audit component will be moved into Home Energy Reports in 2012, from the E&O program.
Direct Canvassing	New (proposed)	Door to door awareness and direct install campaign
K-12 Education	New (proposed). Consists of redesigned energy education for 6 th , 7 th and 8 th grades, and will absorb the existing school-based energy education components from the Education and Outreach Program.	Classroom education including take home direct install kits

Community Education	New (proposed)	"Train the trainer" approach, with hands-on energy efficiency training
CFL Giveaway	New (proposed)	CFL bulb giveaway at outreach events

144. Home Energy Reports. Although budgeted separately, the Home Energy Reports subprogram is part of the overall Behavioral Comprehensive Program. The existing Home Energy Reports are designed to instigate behavioral changes in customers' energy consumption by (i) making customers aware of their energy consumption; and then (ii) allowing them to compare that usage to similarly situated homes. The subprogram targets habitual behaviors (e.g., lights and thermostats), purchasing behaviors (standard versus energy efficient appliances), and participation in demand-side management programs.

145. In addition, the on-line energy audit function that is currently part of the Education and Outreach (now Consumer Education and Outreach) Program will transition to the Home Energy Report subprogram during the first half of 2012.

146. Direct Canvassing. The direct canvassing initiative is a grass-roots, door-to-door approach to promoting energy efficiency, and is designed to reach neighborhoods difficult to reach through traditional messaging. The subprogram would use trained volunteers from local community organizations to talk to customers about energy efficiency. Two CFLs would be left with each customer, along with program materials for appropriate UNSE DSM programs.

147. K-12 Education. In addition to energy based class room curriculum, students would be instructed in energy saving approaches for their homes. Students in grades 6-8 would be provided with a take home kit which includes CFLs and refrigerator thermometers, as well as educational materials on how to reduce energy use.

148. Beginning in 2012, the K-12 subprogram will also offer the academic support activities currently offered under the Education and Outreach ("E&O") Program, which will become the Consumer Education and Outreach ("CEO") Program. The E&O Program's school-based energy education activities will be transferred to the K-12 subprogram, to consolidate school-based energy education into one subprogram.

1 149. Community Education. The Community Education Program would engage
2 community groups and work with public entities with “train the trainer” hands-on energy
3 efficiency seminars. Community trainers would be given a broad based review of energy,
4 efficiency and comfort principles. The seminars include hands-on training with a wide sample of
5 materials such as weather stripping, low flow showerheads, caulk or foam sealant and CFLs.

6 150. CFL Giveaway. The Compact Fluorescent Light Give-Away Program will
7 complement UNSE’s presence at community events, and its overall education and outreach efforts,
8 and efficiency messaging. Free CFLs will be made available both at community events and to
9 community organizations, including those involved in our Community Education Program.

10 151. Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the
11 sector, projected costs per category, and total budget for each program.

12 152. Behavioral Comprehensive Program Overall Objectives and Rationale. The energy-
13 related behaviors intended to be influenced by the Behavioral Comprehensive subprograms
14 include the following:

- 15 • Habitual behaviors
 - 16 ▪ Adjust thermostat setting
 - 17 ▪ Turn off unnecessary lights
- 18 • Small purchasing and maintenance behaviors
 - 19 ▪ Purchase and install faucet aerators and low flow shower heads
 - 20 ▪ Purchase and install compact fluorescent lights
 - 21 ▪ HVAC maintenance
- 22 • Larger purchasing decisions
 - 23 ▪ Purchase an ENERGY STAR appliance
 - 24 ▪ Purchase higher EE heating and cooling system through participation in a
25 UNSE DSM Program

26 153. Delivery and Marketing Strategy. All UNSE residential customers would be
27 eligible for this program. Delivery would be made through implementation contractors and UNSE
28 resources.

 154. Program Analysis/Issues. UNSE is proposing to reorganize its education programs
in a way that mirrors the reorganization of the TEP programs.

155. The Company's current proposal is reasonable. Consolidation of school-based energy efficiency education within the K-12 subprogram is likely to improve efficiency, limit duplication of administration effort and expenditure, and reduce confusion between the proposed K-12 subprogram and the existing Education and Outreach Program.

156. Cost-Effectiveness. Cost-effectiveness for measures associated with the proposed new Behavioral Comprehensive subprograms are listed in the table below. For the K-12 Education and Community Education Program, cost-effectiveness of the associated measures was calculated based on the kits as a whole.

Subprogram	Measures	Benefit-cost Ratios
Home Energy Reports	Home Energy Reports	1.21
Direct Canvassing	CFLs	3.13
K-12 Education	CFLs, Faucet Aerator, LED nightlight, Refrigerator thermometer	2.95
Community Education	CFLs, Showerhead, Faucet Aerator, LED nightlight, Refrigerator thermometer	2.81
CFL Giveaway	CFLs (23 Watt)	2.24
CFL Giveaway	CFLs (18 Watt)	3.07

157. Staff Recommendations.

- Staff has recommended that the Behavioral Comprehensive program, and all its subprograms, be approved.

N. Residential Energy Efficiency Financing

158. Program Description. UNSE was ordered to file a proposal for an energy efficiency financing program in Decision No. 72024 (December 10, 2010). UNSE is requesting approval for a new Residential Energy Efficiency Financing pilot program to provide customers with the capital needed to make cost-effective energy efficiency upgrades to their homes. UNSE believes that a two-year pilot program would allow sufficient time for the Company to evaluate the Program, including participation, default rates, and overall value to customers.

159. The Program will offer energy efficiency loans to UNSE customers who are seeking financing for the energy efficiency improvements to their homes. Actual amounts will

1 vary by loan size and terms. Loan proceeds can be used for energy efficiency measures that have
2 been approved by the Commission.

3 160. UNSE evaluated the funding levels and cost to the customer, as shown in Table 1-1
4 below. UNSE assumed an average loan size of \$4,818 and a maximum term of 10 years in these
5 calculations.

6 161. Funding levels and costs to customers are shown in the table below.

	<u>Year 1</u>	<u>Year 2</u>
Loan Amount Available	\$100,000	\$1,000,000
Number of Loans	21	208
Reserve	\$10,000	\$100,000
Buy Down	\$4,006	\$40,059
Total Budget	\$85,968	\$278,104

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14 162. UNSE's proposed Program elements include:

- 15 • Loan commitment of \$1,000,000 per year for two years; this will provide
16 approximately 208 loans based on an average \$4,818 loan amount;
- 17 • Loans available only on energy efficiency measures meeting the Commission-
18 required cost effectiveness test;
- 19 • Low interest rates provided by a combination of an interest rate buy-down and a
20 10% loan loss reserve account;
- 21 • Limited customer exposure to default risk (10% of the loan commitment);
- 22 • Funding provided through an approved demand-side management ("DSM")
23 surcharge charged to residential customers;
- 24 • Affordable residential financing for energy efficiency measures;
- 25 • Convenient customer access to and repayment of the financing;
- 26 • Standard finance product offering for all eligible, approved borrowers;
- 27 • Leveraged financing;
- 28

1 • Accurate Truth-in-Lending notifications and billing to customers provided by
2 an experienced third party lender; and

3 • Community involvement in forming and marketing the Program.

4 163. Funding. UNSE has proposed an increase in the DSM Surcharge of \$0.0003 per
5 kWh to fund the Program. The average annual cost to each residential customer would be \$3.08.
6 UNS proposes that the DSM Surcharge necessary to fund this program be collected only from
7 residential customers, as the loan instruments described are restricted to residential customers.
8 Staff has recommended against the Company's request to charge Residential customers separately
9 for this individual program.

10 164. Program Objectives and Rationale. The Program is designed to provide an
11 equitable and comprehensive approach to the financing of energy efficiency improvements in
12 existing homes. UNSE believes that the Program's financing options to help cover the costs of
13 energy efficiency measures will improve customer participation in energy efficiency programs and
14 expand the pool of customers that can afford to participate in those programs. Although other
15 vendors offer financing for their own individual products, the Program's comprehensive approach
16 to home energy upgrades cuts across several potential products and includes efficiency measures
17 not traditionally financed, such as air and duct sealing.

18 165. UNSE states that it has three primary objectives with respect to providing a
19 financing option:

- 20 1) The program design must eliminate the utility from any Truth-in-Lending Law
21 regulation implications;
- 22 2) The program must provide a reasonable amount of funds at a reasonable interest
23 rate and with a low initial investment; and
- 24 3) Energy efficiency measures that qualify for UNSE financing must have met the
25 Commission's cost-effectiveness test.

26 166. Budget. See UNSE EE Implementation Plan Budget Table, herein, which lists the
27 sector, projected costs per category, and total budget for each program.

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1 167. Target Market. The target market for this Program is any residential customer in
2 UNSE's service territory who own their home. Financing is available for installation of approved
3 and cost effective DSM energy efficiency measures.

4 168. Program Eligibility. Eligible properties include single-family (1 to 4 unit), owner-
5 occupied homes.

6 169. Additional Background. UNSE originally proposed using the Pennsylvania
7 Treasury as the third party lender. Interested parties had recommended making further effort to
8 secure third-party lenders located in Arizona. After the request to further investigate alternative
9 Arizona-based lenders for the similar Tucson Electric Power Company and after experiencing
10 contract issues with the prior lender for the UNS Gas program, suitable loan programs for all three
11 companies were negotiated with a local credit union. UNSE has now chosen Vantage West
12 ("VW"), a local Credit Union, as the third-party lender with loans leveraged by a loss reserve
13 account as well as the possibility of a combination of a 10 percent loan loss reserve account and an
14 interest rate buy-down, all funded from the DSM Surcharge. The interest rate buy-down would
15 bring the rate from VW's normal 11.99 percent down to 7.99 percent.

16 170. UNS Gas, Inc. ("UNS Gas") (an affiliate of UNSE), requested a program nearly
17 identical to the one requested herein. The UNS Gas program was approved in ACC Decision No.
18 72062 (January 6, 2011).

19 171. Issues. In Decision No. 72024 the Company was ordered to work with interested
20 community groups in the UNSE service territory in crafting its proposal for a financing program
21 and to report on its work with such groups in its filing. Although the filing provided detailed
22 information on development of the program, specific information on the Company's work with
23 interested community groups was not included. However, in communication with Staff, the
24 Company confirmed that, while crafting its Residential Financing proposal UNSE met with and
25 received input from: (i) Mohave County Developmental Services; (ii) the Mohave Contractors
26 Association; (iii) the Kingman Chamber of Commerce; and (iv) the City of Kingman Council
27 Members.

28 . . .

1 172. In addition, as required by Decision No. 72024, UNSE corresponded with the State
2 Energy Office to investigate the possibility of partnering with a bank in addressing how the
3 financing program would be initiated. The Energy Office indicated they would not be able to
4 participate or partner in financing programs at this time.

5 173. Cost Effectiveness. This program is a financing program supporting other program
6 measures. There are no energy efficiency measures under this program. The financing program
7 would allow customers to install measures included in the UNSE Energy Efficiency
8 Implementation Plan. Therefore, there is no need for a benefit/cost test for this program and Staff
9 has not performed such analysis for the Residential Energy Financing pilot program. The
10 efficiency measures are parts of other programs and analyzed separately there.

11 174. Staff Recommendations.

- 12 • Staff has recommended approval of the Residential Energy Efficiency
13 Financing Program with a two-year pilot as described herein.
- 14 • Staff recommends that the Commission not approve UNSE's request that the
15 DSM Surcharge for the Residential Energy Financing Program be collected
only from Residential customers.

16 175. Measurement, Evaluation, and Research. Measurement, Evaluation, Research shall
17 be in accordance with the Electric Energy Efficiency Rules, Section R14-2-2415, including the
18 following database activities:

- 19 • As part of Program operation, UNSE would request the Lender to provide the
20 necessary data elements to populate the tracking database and provide periodic
reporting and data collection.
- 21 • UNSE would establish systems to collect the data needed to support effective
22 Program management, transfer of funds from UNSE to the loan loss reserve
23 accounts, reporting, and evaluation.

24 **O. ENERGY CODES ENHANCEMENT PROGRAM**

25 176. Program Description. Improved building energy codes are recognized as a simple
26 and cost-effective means of achieving energy savings over the lifetime of new construction and
27 newly renovated buildings. The UNSE Energy Codes Enhancement Program ("ECEP") seeks to
28 overcome barriers to the adoption of improved building codes.

1 177. Budget. See the UNSE Implementation Plan Budget Table, herein, which lists the
2 sector, projected costs per category, and total budget for each program.

3 178. Program Objectives and Rationale. The objective of the UNSE ECEP is to increase
4 energy savings in new construction and renovated buildings, in both the Residential and
5 Commercial sectors, by improving compliance with existing building energy codes and supporting
6 updates to building codes.

7 179. Delivery and Marketing Strategy. The ECEP would target building committees and
8 city councils, as well as building design officials including architects, engineers, contractors and
9 builders. UNSE Program staff would collaborate with regional and national organizations that
10 track market trends and can offer guidance on best practices for energy code adoption and
11 enforcement.

12 180. Program support to the target audience may include activities such as:

- 13 • Classroom, field and “brown bag” training sessions;
- 14 • Purchasing energy code books for officials that currently lack such resources;
- 15 • Supporting energy code-related certifications for code officials;
- 16 • Conducting energy code compliance assessments by 2017 to fulfill American
17 Recovery and Reinvestment Act (“ARRA”) requirements to demonstrate 90%
18 energy code compliance (may be done in coordination with energy efficiency
19 program Measurement, Evaluation and Research (“MER”) activities); and
- 20 • Collaboration with the Southwest Energy Efficiency Project and other regional
21 groups to support research on and adoption of building codes and equipment
22 standards.

22 181. UNSE staff would be responsible for administering the Program. Responsibilities
23 for these staff would include planning, coordination and implementation of all Program activities.

24 182. Program marketing would be accomplished through direct outreach to municipal
25 officials, participation in building code enhancement committees, cross-marketing with other
26 UNSE energy efficiency programs and through UNSE websites.

27 ...

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1 183. Program Analysis/Issues. According to the U.S. Department of Energy², buildings
2 use 39 percent of our total energy, two-thirds of our electricity, and one-eighth of our water. In
3 light of the increasing cost of energy, building energy efficiency is a key component of sound
4 public policy. One reason is that the benefits of more efficient construction often continue for the
5 life of the structure, often 30 to 50 years.

6 184. DOE research³ shows that contemporary energy codes could save about 330
7 Trillion BTU by 2030, almost 2 percent of total current residential energy consumption. There
8 would also be comparable savings in consumer energy bills, air pollution and greenhouse gas
9 emissions. As is discussed below, however, Arizona is a “home rule” state with no mandatory
10 state-wide energy efficiency building code.

11 185. Although many counties and cities within the state have adopted an EE building
12 code, some municipalities lack the resources and knowledge to effectively enforce existing
13 building codes or implement an energy efficiency-specific code. Many municipal code officials
14 lack the resources to stay current on market trends relevant to building codes, especially given
15 current economic conditions. In jurisdictions that currently lack any type of building code, public
16 officials could benefit from information and assistance in developing and advocating the adoption
17 of a building code.

18 186. In addition to the lack of information and resources impacting the development and
19 enforcement of building codes at the governmental level, building design and construction
20 professionals could likely benefit from additional education and training on code requirements.

21 187. The primary market barriers to achieving maximum energy efficiency from
22 building related codes are as follows:

- 23 • Lack of knowledge and resources to facilitate compliance with existing codes,
24 • Inconsistency in codes across the state, and
25 • Lack of resources to advocate for adoption of new codes.

26 188. Cost-Effectiveness. UNSE has not provided an estimate of energy savings from
27 implementation of the Energy Codes Enhancement Program. Rather, development of tracking

28 ² U.S. Department of Energy website: http://www.energycodes.gov/why_codes/

³ Ibid.

1 metrics and deemed savings methodologies form an integral part of the Program. Energy savings
2 from the Program would be determined upon completion of the Measurement, Evaluation and
3 Research phase of the Program.

4 189. Staff Recommendations. Advocacy of energy codes is an appropriate component of
5 UNSE's 2012 Energy Efficiency Implementation Plan, given the high potential for long-term
6 energy savings. Therefore, Staff has recommended approval of UNSE's Energy Codes
7 Enhancement Program, subject to implementation of the MER.

8 **P. Education and Outreach/Consumer Education and Outreach**

9 190. Program Description. The Education and Outreach ("E&O") Program is an existing
10 program. UNSE is requesting budget approval to continue this program, which is being modified
11 through the transfer of its school-based energy education components and its on-line audit function
12 to subprograms of the Behavioral Comprehensive Program.

13 191. The revised Program would be responsible for marketing of the UNSE portfolio as
14 a whole. It would also be responsible for general consumer education. In order to reflect this
15 change in focus, UNSE is proposing to change the name of the E&O Program to the Consumer
16 Education and Outreach ("CEO") Program.

17 192. With the school-based energy education activities and measures and the on-line
18 audit function moved into the Behavioral Comprehensive Program, the CEO Program would
19 market UNSE's energy efficiency and renewable programs⁴, including Time of Use ("TOU")
20 rates:

- 21 • Develop brochures and communication materials that showcase all available EE
22 and Renewable Programs,
- 23 • Develop and maintain communication materials related to general energy saving
24 information,
- 25 • Provide labor and materials to staff trade shows and community events,
- 26 • Develop and maintain web content to educate consumers on energy use and TOU
27 rate choices, and

28 ⁴ Marketing materials for UNSE energy efficiency programs include information concerning UNSE's renewable programs, providing an added benefit from the funding used to market energy efficiency.

- Cross communication of EE Programs and general energy saving information.

193. Program Objectives and Rationale. The E&O Program is intended to increase participation in the Company's other DSM/EE programs and to promote conservation by customers.

194. Cost-effectiveness. The CEO Program would market the UNSE portfolio, promote conservation generally and educates customers. It does not produce direct savings , but would promote participation in cost-effective programs and measures.

195. Staff Recommendation.

- Staff has recommended that the Education and Outreach (or Consumer Education and Outreach) Program be approved for continuation, with the modifications proposed.

Q. Program Development, Analysis And Reporting Software ("Program Development")

196. Description. This budget item provides program support and covers costs relating to the Implementation Plan as a whole, including program design, database design and development, and technical support. Included in this budget item are the resources necessary for meeting reporting requirements under the Electric Energy Efficiency Rates.

197. Objectives and Rationale. Program Development includes:

- Incremental cost studies,
- Measure and program research and benefit-cost analysis,
- Codes and Standards research and analysis,
- Education and training on new technologies,
- Program design, development and analysis, and
- Software for tracking and reporting to remain in compliance with the Electric Energy Efficiency Rules.

198. Cost-Effectiveness. Program Development costs are associated with administering the Implementation Plan as a whole. These costs are not attributable to one energy efficiency program or measure, but are required to facilitate the energy efficiency goals for all programs and

1 measures. Cost-effectiveness, as such, can not be assessed for this budget item, but the Program
2 Development costs should represent a limited portion of the total budget.

3 199. Projected Program Development costs would equal approximately 3.1% percent of
4 the total budget proposed for 2012. In comparison, incentives represent, respectively,
5 approximately 48% of the 2012 budget.

6 200. Staff Recommendation. Staff has recommended that the budget amounts allocated
7 to program development, analysis and reporting software costs be included in the budget as shown
8 in the application.

9 **U. MEASUREMENT, EVALUATION AND RESEARCH; REPORTING: ALL**
10 **PROGRAMS**

11 201. Measurement, Evaluation, and Research. At a minimum, Measurement,
12 Evaluation, and Research ("MER") shall be done in accordance with the Electric Energy
13 Efficiency Rules, Section R14-2-2415.

14 202. Reporting. At a minimum, Reporting shall be done in accordance with the Electric
15 Energy Efficiency Rules, Section R14-2-2409.

16 **R. BUDGET FLEXIBILITY**

17 203. UNSE has requested the ability to shift up to 25 percent of its approved funds from
18 Residential to Commercial sector programs, or from Commercial to Residential sector programs,
19 based on program activity. The Company has also requested that it be allowed to increase the total
20 budget for the energy efficiency programs by up to 25 percent, where cost-effective. The
21 Company states that this type of flexibility maximizes participation in successful programs and
22 allows it to continue accepting applications from customers in cases where an individual program
23 may be over-subscribed.

24 204. Shifting of Funds. While the Commission has allowed utilities to shift energy
25 efficiency program funding among programs or measures within the Residential sector, or among
26 program or measures within the Commercial sector, recent practice has been to limit shifting from
27 sector to sector, to ensure that both Residential and Commercial customers have reasonable
28 opportunity to participate in energy efficiency programs. Allowing funding shifts among

1 programs or measures within a sector allows a reasonable degree of flexibility, but ensures
2 reasonable access to participation in energy efficiency programs for both Residential and
3 Commercial customers.

4 205. Increase to Total Budget. With a projected budget for 2012 of \$5.5 million, the up
5 to 25 percent flexibility proposed by UNSE could result in an increase of over \$1.36 million,
6 depending on customer participation and actual costs. Although actual spending may be either
7 over or under the level projected for the Implementation Plan, and the Company should be allowed
8 some flexibility to accommodate unanticipated levels of customer participation, the 25 percent
9 level proposed by UNSE is excessive. Allowing an increase of up to 5 percent would provide
10 UNSE with flexibility in responding to higher-than-anticipated customer participation, but would
11 better limit potential costs.

12 206. Staff Recommendations.

- 13 • Staff has recommended that the Company be allowed to shift funding from
14 measure to measure, or from less active to more active programs, for up to 25%
15 of the budget originally allocated to the less active program. Budget shifting
16 may only be done within, and not between, the Residential and Non-Residential
17 program sectors.
- 18 • Staff has recommended that the Company be allowed to increase the overall
19 Implementation Plan budget by up to 5 percent, if the increases are allocated to
20 Commission-approved cost-effective measures and programs.

21 **S. DEMAND-SIDE MANAGEMENT SURCHARGE (“DSMS”)**

22 207. UNSE is requesting an updated DSMS consisting of an under-collection of
23 approximately \$398,000, a 2012 projected Implementation Plan expenses of \$5.7 million and a
24 Performance Incentive of approximately \$2.23 million, resulting in a DSMS of \$0.005381 per
25 kWh. Staff is recommending a Performance Incentive of approximately \$687,000 for 2011 and
26 2012 combined, based on the method of calculation currently used by TEP. (The TEP
27 performance incentive is based on 10% of the net benefits from the DSM portfolio, excluding the
28 LIW, E&O and Direct Load Control Programs, with a cap based on 10 percent of DSM spending.)
Based on the current under-collection and the proposed budget, this would result in a DSMS of

1 \$0.004382 per kWh. The final DSMS should be adjusted to reflect any changes ordered by the
2 Commission.

3 208. DSM program costs. The DSMS should include recovery for the projected cost of
4 the UNSE's Implementation Plan, and should reflect any actions taken by the Commission with
5 respect to the Implementation Plan.

6 209. DSM Performance Incentive. The EE Rules state that "an affected utility may
7 propose for Commission review a performance incentive to assist in achieving the energy
8 efficiency standard. . . ." (R14-2-2411) (The EE Rules do not provide for revision of an existing
9 performance incentive, as is the case with TEP.) UNSE has proposed a Performance Incentive
10 based on the modified methodology proposed by TEP, resulting in a Performance Incentive of
11 \$2.23 million. Staff has recommended that UNSE have a performance incentive calculated using
12 the same methodology *currently* being used for TEP, resulting in a Performance Incentive of
13 approximately \$687,000.

14 210. DSMS Reset Level. The current DSMS is \$0.000995 per kWh. UNSE has
15 requested to increase the DSMS to \$0.005381 per kWh, based on the currently anticipated
16 collection period. Based on the analysis indicated above, Staff has recommended a DSMS of
17 \$0.004382 per kWh. The impacts, based on average Residential usage, are shown in the table
18 below:

Residential Usage	kWh/month	Current DSMS/kWh	Current Bill Impact/month	UNSE Proposed DSMS/kWh	UNSE Proposed DSMS Impact/month	Staff Proposed DSMS/kWh	Staff Proposed DSMS Impact/month
Summer Average	980	\$0.000995	\$0.98	\$0.005381	\$5.27	\$0.004382	\$4.29
Winter Average	700	\$0.000995	\$0.70	\$0.005381	\$3.77	\$0.004382	\$3.07
Annual Average	840	\$0.000995	\$0.84	\$0.005381	\$4.52	\$0.004382	\$3.68

25 211. Recommendations. Recommendations regarding the DSMS are listed below:

- Staff has recommended that the DSMS include: (i) the program spending approved by the Commission in this Decision; and (ii) the Performance Incentive, as calculated herein.

28 ...

- 1 • Staff has also recommended that calculation of the DSMS take into account the
2 current DSM balance.
- 3 • Staff has recommended that the DSMS be reset to \$0.004382 per kWh.

4 212. Adjustor Reset and Reporting Requirements. The Company requested that the
5 current April 1 surcharge filing requirement and semi-annual DSM reporting (March 1 and
6 September 1) requirements be superseded by the reporting requirements of A.A.C. R14-2-2409.
7 UNSE plans to file for an adjustor rate reset annually, as part of its Implementation Plan filings,
8 beginning in June 2012, with the actual reset to take effect in January 2012.

- 9 • Staff has recommended that the current surcharge filing and DSM reporting
10 requirement be superseded by the reporting requirements of A.A.C. R14-2-2409.
- 11 • Staff has also recommended that, in any year during which the Company does not
12 file an Implementation Plan, or does not address the DSM adjustor reset within its
13 Implementation Plan, an adjustor reset application should be filed separately, no
later than April 1.

14 T. CALCULATING COST-EFFECTIVENESS

15 213. Staff has recommended that, in all future DSM Implementation Plans, the Company
16 use the same input values and methodology as Staff for calculating the present value benefits and
17 costs to determine benefit-cost ratios.

18 U. SUMMARY OF RECOMMENDATIONS

19 214. Staff has made the following recommendations:

20 Overall

- 21 • In cases where a measure is not approved, the funding associated with that
22 measure should be used to fund cost-effective measures within the same
program, if possible.
- 23 • The Company should have the flexibility to transfer funding among cost-
24 effective measures, within each program, to accommodate varying participation
levels.
- 25 • The Company should have the flexibility to move up to 25% of funding from
26 program to program within each sector, to accommodate varying participation
27 levels. However, funding may not be transferred out of the Low-Income
Weatherization Program.

- 1 • The Company should track federal standards, including those for lighting, to
2 ensure that measures promoted by the UNSE Implementation Plan offer cost-
3 effective savings over and above current baselines.
- 4 • Staff acknowledges that achieving the 2011 and 2012 standards may be difficult
5 because of the timing of the approval of the Implementation Plan. Therefore, a
6 waiver should be granted for 2011 and 2012 but the cumulative standard to
7 achieve by 2020 not be waived at this time.
- 8 • that, going forward, savings be enhanced through an increased focus on the
9 approved measures or programs producing the most savings per dollar spent,
10 while still allowing both Residential and Non-residential sectors reasonable and
11 equitable access to Implementation Plan programs.

12 Appliance Recycling

- 13 • The UNSE Appliance Recycling Program should be approved and it should
14 include both the refrigerator and freezer measures.
- 15 • The Company should offer a \$30 incentive, rather than the \$35 incentive
16 proposed, but the overall budget for incentives should not be decreased.

17 Multi-Family Housing Efficiency

- 18 • The proposed Multi-Family Program should be approved, with older, less
19 efficient and low-income complexes as a primary focus for the Multi-Family
20 Program's activities.

21 Efficient Products

- 22 • The Efficient Products Program should be approved and continue to offer CFLs,
23 with the addition of the Variable Speed Pool Pump, Advanced Power Strip and
24 Pool Pump Timer measures.
- 25 • The Residential LED Light measure should not be approved at this time.
- 26 • The lifespan of CFL measures should be re-evaluated for the Company's next
27 Implementation Plan, and any changes to these assumptions should be
28 incorporated into cost-effectiveness and savings calculations for the Efficient
29 Products Program.

30 Low-Income Weatherization

- 31 • The Low-Income Weatherization Program should be approved for continuation
32 as part of UNSE's Implementation Plan.
- 33 • UNSE should be allowed to tie the eligibility level for the UNSE LIW Program
34 to the eligibility level set for the federal Low-Income Home Energy Program
35 ("LIHEAP"), so that the eligibility levels remain consistent over time.

1 Residential New Construction

- 2 • that UNSE RNC Program should be approved for continuance pending action
3 on the Company's filing forty-two month filing, as referenced in Decision No.
4 71641.

4 Existing Homes and Audit Direct Install

- 5 • The Existing Homes and Audit Direct Install Program should be approved for
6 continuance.

7 Shade Tree

- 8 • The Shade Tree Program should be approved for continuance.

9 Bid for Efficiency

- 10 • The UNSE Bid for Efficiency Pilot Program should be approved as a two-year
11 pilot program as discussed herein.
12 • Individual project incentives under this program should be capped at 60 percent
13 of the incremental costs of the efficiency measures included in the project.

14 Retro-Commissioning

- 15 • The UNSE Retro-commissioning Program should be approved.

16 Schools Facilities

- 17 • The School Facilities Schools Program should be approved.

18 C&I Facilities

- 19 • that the C&I Facilities Program be approved for continuance, with the proposed
20 new measures.

21 Behavioral Comprehensive

- 22 • The Behavioral Comprehensive program, and all its subprograms, should be
23 approved.

24 Residential Energy Financing

- 25 • The Residential Energy Efficiency Financing Program should be approved for a
26 two-year pilot as described herein.
27 • UNSE's request that the DSM Surcharge for the Residential Energy Financing
28 Program be collected only from Residential customers should not be approved.

Energy Codes Enhancement

- UNSE's Energy Codes Enhancement Program should be approved, subject to implementation of the MER and Reporting protocols stated herein.

Education and Outreach

- The Education and Outreach (or Consumer Education and Outreach) Program should be approved for continuation, with the modifications proposed.

Program Development

- The budget amounts allocated to program development, analysis and reporting software costs should be included in the budget be approved, as shown in the application.

Budget Flexibility

- The Company should be allowed to shift funding from measure to measure, or from less active to more active programs, for up to 25 percent of the budget originally allocated to the less active program. Budget shifting should only be done within, and not between, the Residential and Non-Residential program sectors.
- The Company should be allowed to increase the overall Implementation Plan budget by up to 5 percent, if the increases are allocated to cost-effective measures and programs.

DSMS

- The DSMS should include: (i) the program spending approved in this Decision; and (ii) the Performance Incentive, as calculated in the manner set in the last rate case.
- Calculation of the DSMS should take into account the current DSM balance.

Staff acknowledges that achieving the 2011 and 2012 standards may be difficult because of the timing of the approval of the Implementation Plan. Therefore, a waiver should be granted for 2011 and 2012.

- The DSMS should be reset to \$0.004382 per kWh.

Adjustor Reset and Reporting Requirements

- The current surcharge filing and DSM reporting requirement should be superseded by the reporting requirements of A.A.C. R14-2-2409.

...

...

- 1 • In any year during which the Company does not file an Implementation Plan, or
2 does not address the DSM adjustor reset within its Implementation Plan, an
adjustor reset application should be filed separately, no later than April 1.

3 Calculating Cost-Effectiveness

- 4 • Staff recommends that, in all future DSM Implementation Plans, the Company
5 use the same input values and methodology as Staff for calculating the present
6 value benefits and costs to determine benefit-cost ratios.

7 CONCLUSIONS OF LAW

8 1. UNSE is an Arizona public service corporation within the meaning of Article XV,
9 Section 2, of the Arizona Constitution.

10 2. The Commission has jurisdiction over UNSE and over the subject matter of the
11 application.

12 3. The Commission, having reviewed the application and Staff's Memorandum dated
13 January 3, 2012, concludes that it is in the public interest to approve the UNSE 2011-2012 Energy
14 Efficiency Implementation Plan, with the modifications discussed herein.

15 ORDER

16 IT IS THEREFORE ORDERED that UNS Electric, Inc. Implementation Plan is approved,
17 with the modifications discussed herein.

18 IT IS FURTHER ORDERED that, in cases where a measure is not approved, the funding
19 associated with that measure shall be used to fund cost-effective measures within the same
20 program, if possible.

21 IT IS FURTHER ORDERED that UNS Electric, Inc. shall have the flexibility to transfer
22 funding among cost-effective measures, within each program, to accommodate varying
23 participation levels.

24 IT IS FURTHER ORDERED that UNS Electric, Inc. shall have the flexibility to move up
25 to 25 percent of funding from program to program within each sector, to accommodate varying
26 participation levels. Funding may not be transferred out of the Low-Income Weatherization
27 Program.

28 ...

1 IT IS FURTHER ORDERED that UNS Electric, Inc. shall track federal standards,
2 including those for lighting, to ensure that measures promoted by the UNS Electric, Inc.
3 Implementation Plan offer cost-effective savings over and above current baselines.

4 IT IS FURTHER ORDERED that the cumulative standard to achieve by 2020 not be
5 waived at this time, but a waiver is granted for 2011 and 2012 only.

6 IT IS FURTHER ORDERED that, going forward, savings be enhanced through an
7 increased focus on the approved measures or programs producing the most savings per dollar
8 spent.

9 Appliance Recycling

10 IT IS FURTHER ORDERED that the UNS Electric, Inc. Appliance Recycling Program is
11 approved and shall include both the refrigerator and freezer measures.

12 IT IS FURTHER ORDERED that UNS Electric, Inc. shall offer a \$30 incentive, rather
13 than the \$35 incentive proposed, but that the overall budget for incentives shall not be decreased.

14 Multi-Family Housing Efficiency

15 IT IS FURTHER ORDERED that the proposed Multi-Family Program is approved, with
16 older, less efficient and low-income complexes as a primary focus for the Multi-Family Program's
17 activities.

18 Efficient Products

19 IT IS FURTHER ORDERED that the Efficient Products Program is approved, and shall
20 continue to offer CFLs, with the addition of the Variable Speed Pool Pump, Advanced Power Strip
21 and Pool Pump Timer measures.

22 IT IS FURTHER ORDERED that the Residential LED Light measure is not approved at
23 this time.

24 IT IS FURTHER ORDERED that the lifespan of CFL measures shall be re-evaluated for
25 UNS Electric, Inc.'s next Implementation Plan, and any changes to these assumptions shall be
26 incorporated into cost-effectiveness and savings calculations for the Efficient Products Program.

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1 Low-Income Weatherization

2 IT IS FURTHER ORDERED that the Low-Income Weatherization Program is approved
3 for continuation as part of UNS Electric, Inc.'s Implementation Plan.

4 IT IS FURTHER ORDERED that UNS Electric, Inc. shall be allowed to tie the eligibility
5 level for the UNS Electric, Inc. LIW Program to the eligibility level set for the federal Low-
6 Income Home Energy Program ("LIHEAP"), so that the eligibility levels remain consistent over
7 time.

8 Residential New Construction

9 IT IS FURTHER ORDERED that UNS Electric, Inc. RNC Program should be approved
10 for continuance pending action on the Company's filing forty-two month filing, as referenced in
11 Decision No. 71641.

12 Existing Homes and Audit Direct Install

13 IT IS FURTHER ORDERED that the Existing Homes and Audit Direct Install Program is
14 approved for continuance.

15 Shade Tree

16 IT IS FURTHER ORDERED that the Shade Tree Program is approved for continuance.

17 Bid for Efficiency

18 IT IS FURTHER ORDERED that the UNS Electric, Inc. Bid for Efficiency Pilot Program
19 is approved as a two-year pilot program as discussed herein.

20 IT IS FURTHER ORDERED that individual project incentives under this program shall be
21 capped at 60 percent of the incremental costs of the efficiency measures included in the project.

22 Retro-Commissioning

23 IT IS FURTHER ORDERED that the UNS Electric, Inc. Retro-commissioning Program is
24 approved.

25 Schools Facilities

26 IT IS FURTHER ORDERED that the School Facilities Schools Program is approved.

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1 C&I Facilities

2 IT IS FURTHER ORDERED that the C&I Facilities Program be approved for continuance,
3 with the proposed new measures.

4 Behavioral Comprehensive

5 IT IS FURTHER ORDERED that the Behavioral Comprehensive Program, and all its
6 subprograms, is approved.

7 Residential Energy Financing

8 IT IS FURTHER ORDERED that the Residential Energy Efficiency Financing Program is
9 approved for a two-year pilot as described herein.

10 IT IS FURTHER ORDERED the costs of the Residential Energy Financing Program be
11 collected through the existing DSMS mechanism.

12 Energy Codes Enhancement

13 IT IS FURTHER ORDERED that UNS Electric, Inc.'s Energy Codes Enhancement
14 Program is approved, subject to implementation of the MER and Reporting protocols stated herein.

15 Education and Outreach

16 IT IS FURTHER ORDERED that the Education and Outreach (or Consumer Education
17 and Outreach) Program is approved for continuation, with the modifications proposed herein.

18 Program Development

19 IT IS FURTHER ORDERED that the budget amounts allocated to program development,
20 analysis and reporting software costs shall be included in the budget are approved, as shown in the
21 application.

22 Budget Flexibility

23 IT IS FURTHER ORDERED that UNS Electric, Inc. shall be allowed to shift funding from
24 measure to measure, or from less active to more active programs, for up to 25 percent of the
25 budget originally allocated to the less active program. Budget shifting shall only be done within,
26 and not between, the Residential and Non-Residential program sectors.

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1 IT IS FURTHER ORDERED that UNS Electric, Inc. shall be allowed to increase the
2 overall Implementation Plan budget by up to 5 percent, if the increases are allocated to cost-
3 effective measures and programs.

4 DSMS

5 IT IS FURTHER ORDERED that the DSMS shall include: (i) the program spending
6 approved by this order; and (ii) the Performance Incentive, as calculated in the manner set in the
7 last rate case.

8 IT IS FURTHER ORDERED that calculation of the DSMS shall take into account the
9 current DSM bank balance.

10 IT IS FURTHER ORDERED that the DSMS shall be reset to \$0.004382 per kWh.

11 Adjustor Reset and Reporting Requirements

12 IT IS FURTHER ORDERED that the current surcharge filing and DSM reporting
13 requirement shall be superseded by the reporting requirements of A.A.C. R14-2-2409.

14 IT IS FURTHER ORDERED that, in any year during which UNS Electric, Inc. does not
15 file an Implementation Plan, or does not address the DSM adjustor reset within its Implementation
16 Plan, an adjustor reset application shall be filed separately, no later than April 1.

17 IT IS FURTHER ORDERED that UNS Electric, Inc. file a tariff in compliance with this
18 Decision within 30 days of the effective date of this Decision.

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1 Calculating Cost-Effectiveness

2 IT IS FURTHER ORDERED that, in all future DSM Implementation Plans, UNS Electric,
3 Inc. use the same input values and methodology as Staff for calculating the present value benefits
4 and costs to determine benefit-cost ratios.

5 IT IS FURTHER ORDERED that this Decision shall become effective immediately.

6

7 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

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CHAIRMAN COMMISSIONER

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COMMISSIONER COMMISSIONER COMMISSIONER

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IN WITNESS WHEREOF, I, ERNEST G. JOHNSON,
Executive Director of the Arizona Corporation Commission,
have hereunto, set my hand and caused the official seal of this
Commission to be affixed at the Capitol, in the City of Phoenix,
this _____ day of _____, 2012.

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ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

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DISSENT: _____

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DISSENT: _____

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SMO:JMK:tdp/CHH

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1 SERVICE LIST FOR: UNS Electric, Inc.
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